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DISTANCE HIGHER EDUCATION IN THE PEOPLE'S REPUBLIC OF CHINA

A thesis submitted for a Doctor of Philosophy

by

Robert McCormick B.Sc., M.A., PGCE

Distance Learning and Chinese Studies

January 1992

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Some of the data upon which this thesis builds has been published in Hawkrigge & McCormick (1983) and McCormick (1982, 1985 & 1986). (See references.) However for the purposes of this thesis they have been treated as secondary sources. Only in the case of McCormick (1986) have the words been drawn upon and updated within this thesis (in Chapter 8). Acknowledgement is made in the text at appropriate points, and Appendix 1 gives a complete account of how data were collected and the way they have been used in the thesis.

Robert McCormick
January 1992

ABSTRACT

This is a study of distance learning as part of the higher education system in China. The thesis investigates the development of distance learning systems in the post-Mao period (1976-1991), and assesses their roles in higher education as a whole. The first part of the thesis considers the theory, policy and practice in China as contexts within which distance learning has to operate. It also considers concepts and hopes for distance learning that are found in the international literature. Three major distance learning systems are investigated in detail in the second part of the thesis. The third part considers these systems in the context of one province and also in the national context, bringing together the first two parts.

The contribution of distance learning to higher education in China has been important, and it has shown great promise. However, the government at local and national level has sought to control some of the systems to suit its planning needs for the economy, and to conform to its view of quality. The thesis argues that this has meant that an opportunity has been lost to capitalize on the contribution of distance learning. Future developments are likely to rest in part on changes to programmes away from the higher education level, and in part on the degree to which the systems co-operate and indeed integrate their activity.

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Robert McCormick

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ABBREVIATIONS

CCP	Chinese Communist Party
CCPCC	Chinese Communist Party Central Committee
CCTV	Central China Television
CD	<i>China Daily</i> (newspaper)
CETV	China Educational Television
CRGDJYYJ	<i>Chengren gaodeng jiaoyu yanjiu</i> (Adult Higher Education Research)
CRTVU	Central Radio and Television University
DERO	Distance Education Research Office (of CRTVU)
FBIS	Foreign Broadcast Information Service (CAR, CPS, CHI)
GDJYYJ	<i>Gaodeng jiaoyu yanjiu</i>
GDZX	<i>Gaodeng zhanxian</i>
GMRB	<i>Guangming Ribao</i> (newspaper)
GNP	Gross national product
JYYJ	<i>Jiaoyu yanjiu</i> (Educational Research - journal)
JPRS	Joint Publications Research Service
MRTVU	Municipal Radio and Television University
NFRB	<i>Nanfang Ribao</i> (Southern Daily - newspaper)
NPC	National People's Congress
PEC	Provincial Education Commission
PRC	People's Republic of China
PRTVU	Provincial Radio and Television University
RMB	<i>Renminbi</i> (Chinese currency)
RMRB	<i>Renmin Ribao</i> (People's Daily - newspaper)
RTVU	Radio and Television Universities
SEC	State Education Commission
SWB/FE	Summary of World Broadcasts Part 3: The Far East
TVI	Tutored Video Instruction
UK	United Kingdom
USA	United States of America
VCR	video cassette recorder
WHB	<i>Wenhuibao</i> (newspaper)
XHRB	<i>Xinhua Ribao</i> (New China Daily)
ZGJYB	<i>Zhongguo jiaoyu bao</i> (newspaper)
ZJZXKS	<i>Zhejiang zixue kaoshi</i> (Zhejiang Self-study Examination - magazine)

Note on Chinese romanization

The PRC method of romanization (*pinyin*) has been used throughout, except where it is from a publication, in which case the original form is used. Chinese terms are given in italic and the characters are given in the Chinese glossary at the end of the thesis. Chinese source material is also shown in italics and separately listed in the references. Thus *Zhang* (1989) can be found in the Chinese-language sources, and Zhang (1988) in the English-language sources.

CHAPTER 1 INTRODUCTION

The Importance of the study of distance learning

There are two basic ways of looking at why distance learning in China is significant. The first is from the point of view of those in China who are concerned to develop it as a part of higher education. The government in China has shown an interest in the development of distance learning, initially through the Radio and Television Universities (RTVU), and senior government officials have also emphasised the importance of other forms of distance learning. This has been reinforced by one of the World Bank loan projects on higher education that included support for the RTVU. The government's initial interest was to see distance learning as a way of increasing the provision of higher education, although, as I will show, this subsequently changed to encompass other concerns. This increase in the provision of higher education meant distance learning taking up a role parallel to the conventional system. But there was also the possibility of distance learning fulfilling the needs for higher education that the conventional system could not satisfy.

The second way involves an international perspective. China has been admired for its general approach to adult education (e.g. Hunter & Keehn, 1985; Colletta, 1981) and distance learning as part of it intensified this interest. The fact that the distance learning systems in China are so large makes them of particular interest to those outside China, generating issues that transcend a particular country.

In the early 1980s, when the research for this thesis started, it was not clear that the influence of Maoist thinking would wane so markedly. It appeared to me at that time that some of the ideas of Mao could be combined with those of the current government to produce education that increased mass participation and satisfied the needs of modernization as envisaged by Deng Xiaoping. However, the debate between the two lines is no longer fashionable, and the swings of policy that have marked the development of China (Maxwell, 1979) look less in need of reconciliation because of the rejection of Maoist views. Nevertheless elements of Maoist thinking strike a chord with those in other countries who promote distance education (e.g. Rumble, 1986).

The two different perspectives on distance education in China, the national and the international, come together to make its study of interest not only to people in China, but also to those outside. For those of us outside China it is important to understand how policies and practices unique to the Chinese context affect the development of distance education. Only a few reviews of distance education systems pay sufficient heed to the specific context of countries in which they exist (e.g. Daniel, 1988).¹ A study of distance learning systems in the context of a particular country is therefore important to understanding such systems. For those inside China the purpose is to bring an outside perspective to bear, while trying to understand the particular situation in China. Although there is an increasing literature on distance education within China, there are as yet few major studies of the systems using the ideas both of educational theory, policy and practice in China *and* distance education theory and practice.² This thesis is an attempt to rectify this situation.

If a study of distance education in China is important what systems should be the focus? In the early 1980s those dealing with higher education had the highest profile, partly because of government policy on this sector. It was also partly because internationally higher education distance learning institutions were the most commonly studied (e.g. Kaye & Rumble, 1981; Rumble & Harry, 1982). At that time the three systems of the Radio and Television Universities (RTVU), correspondence education, and the self-study examination system, were the only ones in existence at the higher education level.³ As will become evident, the three systems are now being encouraged to link up and this adds weight to their choice for investigation in one study.

Approach of the study

As I noted above studies of distance learning systems do not always include a consideration of the context of their countries' policies. A number of 'theoretical' texts and articles debate ideas in the abstract, trying for example to discuss models of systems. While some attempt must be made to generalize and to create analytic categories few studies ground these in any more than a passing way to case studies of actual systems.⁴ This is not to criticize such attempts, but to point out the need to rectify this and to focus

on particular contexts. The situation in China is unique because it allows the study of several systems within a 'single' context; each of which offered higher education, and that individually are amongst the largest in the world.

The study of Chinese education has interested many scholars, most of whom are China specialists. Some take a political view, treating schools as institutions that reflect wider changes in Chinese institutional life (e.g. Pepper, 1982, p.148) and so they focus on the conventional system. This has meant that the non-formal sector, which is largely adult education, has had relatively less attention. Yet, as I will show in Chapter 2, there is a tradition of non-formal approaches to education in modern China. A more recent addition to non-formal education, distance education, has had even less attention. These factors make a study, which attempts to relate elements of Chinese educational theory, policy and practice to international ideas on distance learning, important to scholars of China. It involves, for example, asking questions about the relationship of the conventional sector to adult education, and within this distance education. Policies that affect one sector inevitably affect another.

The approach of this thesis is therefore to combine the ideas from distance learning with those obtained from a knowledge of the particular context of China. Both are used in trying to understand and deal with the complexity of the situation in China. Both are used in analysing the development of the systems, judging their success, and exploring the role they have in the higher education system of China.

The methodology of the study

The two sources of ideas discussed above have been used to form the analytic categories to consider the distance learning systems in China. This inevitably means a degree of eclecticism in their use and a search for some common ideas that will allow a better understanding of the distance learning systems. It also means that neither of the approaches of these fields dominates the way the study has been conducted.⁶

The data for this research were based on a number of types and techniques of collection. Several visits have been made to China, one for an extended period, and formal and

informal means were used to collect data. During the visits Chinese-language documents and some unavailable (in the UK) texts were collected, and these were used as primary source material. There were also a large number of Chinese language journals and documents that are available in the UK (and Hong Kong), and again they were used as source material, along with the usual translation material. Finally a number of reports, some unpublished, were available to me through my connection with those who have visited China. (Appendix 1 gives a more detailed account of my sources of information.) These sources provide sufficient cross-checks to help reinforce and substantiate the ideas and arguments of the thesis.

Structure of the thesis

To take up the viewpoint of the Chinese context Part 1 of the thesis examines the education situation in China. This context is represented by the theoretical ideas that are relevant to the distance learning systems and that stem from Chinese sources (Chapter 2). Some of these ideas were developed outside the context of distance learning, indeed in a political context, but are nevertheless pertinent to it (for example, group learning and independent study). Other ideas come from policy and practice within the Chinese education system. These ideas establish the context within which distance learning systems must operate. But they also allow an investigation of the role that distance learning might take given the situation in the conventional and adult education systems (Chapters 3 & 4). Finally in Part 1 the international ideas on distance learning are investigated to provide the second perspective on the distance education systems in China. Both of these perspectives (the Chinese context and distance learning) are represented by a series of headings to investigate the distance learning systems that are the subject of the examination in Part 2.

Part 2 is made up of detailed studies of the three systems, namely the RTVU, correspondence education, and the self-study examination system. Each of these is explored to see how they have developed, their role, and how they match up to the criteria for investigation derived from Part 1. The treatment of each is different reflecting the different amounts of previously published studies and the different nature of the systems

themselves. Although their development and role may be treated differently, a common framework is used to see whether each fulfils the kind of promise that those in China and in the international distance learning community hope for. The uniqueness of the systems also brings out unique issues and these are explored where appropriate.

Part 3 brings the three systems together to see them in a complete context, at provincial level and at a national level. It seeks to understand the development of the systems as a whole and to see how they perform their roles in the higher education system. It also provides a summary of how far the promise of distance learning has been fulfilled for the three systems, and what have been the factors preventing them from fulfilling this promise. Although much has been achieved, I shall argue that the full potential of some of the systems has not been realized, most significantly because of policy changes by the government. As indicated earlier there is a movement to link the systems and so such a combined picture is important to understanding the future of them. It is this combined future that I see as holding the key to realizing the potential of distance learning in China.

NOTES

1. This is inevitable in such international reviews, but even when various systems are presented as case studies (e.g. Rumble & Harry, 1982) only superficial elements about the specific context can be presented.
2. Most of the accounts of distance learning systems are mainly descriptive, including those by Chinese scholars (e.g. Zhong, 1991; Wei, 1991; McCormick, 1986).
3. A fourth system has developed since the mid-1980s, the Television Teacher's College, but even today there are few details available. Reference will be made to this system at appropriate points.
4. This is not to suggest that some authors do not ground their work in empirical evidence; for example, Rumble & Harry (1982) make only modest theoretical generalizations from the case studies that make up the major part of this work. Keegan (1986), on the other hand, uses a methodology based on visits to many distance learning institutions, where inevitably the particular context has to be a minor feature.
5. However, China is not a single context, because of the variations among provinces and indeed within them.
6. In studying the context of China there are of course several approaches that are used, and, as I indicated earlier, political scientists have had a strong influence on the study of education. My point is that the theoretical approaches that they take have not been followed in this thesis, although the insights gained have been used.

CHAPTER 2 CHINESE EDUCATION THEORY

INTRODUCTION

The purpose of this chapter is to explore issues that underpin Chinese educational policy, and that are relevant to distance education. Several of these issues that relate directly to distance learning stem from Chinese educational theory of the Maoist period. Two, 'learning' and 'access', are important because they have much in common with concerns in the distance learning literature. Indeed some aspects of learning developed in the 1930s in China show remarkable insight into possible ways of conducting independent study, a central element of much of distance learning.¹ Access to education, especially by peasants and workers has been a strong part of Maoist ideology and formed an important part of policies during the Cultural Revolution, for example. Access is one of the features of distance learning, especially *mass* access.

The third issue, the combination of education and productive work, is relevant because much of distance learning is part-time and allows working people to, for example, apply what they are learning to their work. In China combining education and work has been part of educational policy in different ways since liberation. When politics are to the fore in education then there is a strong ideological objective. When economic development is more important, as currently, then combining education and work has different objectives. It is important to explore this theoretical context because it is such a strong part of the rhetoric, and the language is evident today even although the objectives differ from those during the Maoist era.

A fourth issue is the role of education in economic development, and it too has varied in the way it has affected educational policy since liberation. It is, as I have said, currently a dominant part of educational policy. Because of this I will explore some basic ideas, and explore how the Chinese government has changed its view on how the economy and education inter-relate. This forms a context for policy towards distance learning systems, and has affected them greatly.

To deal with the above issues I will start by looking at the legacy of Mao in relation to learning, not because it informs much current thinking and policy, but because it could inform ideas on distance learning in China. I will then turn to the combination of education and work to look, not just at what (little) theory existed in the Maoist period, but also at how current policy uses a similar language for different objectives. Next in looking at the issue of access I will consider Maoist views that, although again not fashionable in the same terms, could provide a rationale for distance learning. Finally I will turn to the way education is seen as an investment for economic development.

LEARNING AND THE LEGACY OF MAO

Chapter 1 has already indicated that policy has changed since 1976, and educational policy was no exception. But the ideas from the Maoist period as I have said are relevant to distance learning. These ideas, although much discussed in relation to schools and conventional colleges, are much less dealt with in relation to adult education in general and distance learning in particular.² For this reason I will elaborate the ideas and their implementation in the Maoist era, especially in the Yanan period where much of the ideas for policy were formulated. The ideas developed from Mao's experiences of non-formal education and so I will start by outlining these.

Mao's educational experiences and ideas

Mao Zedong's early experiences of formal education were so bad that in 1912 he gave up and turned to self-education (Chu, 1980, p.9), although he was to return to formal education later. He turned to self-education in reaction to the pedagogy he experienced and the subjects he had to study; later he reacted against formal schooling in Marxist-Leninist terms, as a part of the superstructure of society and the way it served the class interests of the bourgeoisie. His interest in self-education (self-study) began in 1911. Schram (1963, p.214) claims that this was one of the two most important instruments of education for Mao. Many of his subsequent educational initiatives prior to liberation were of a non-formal kind, some with a strong self-study idea (Chu, 1980, pp.11-32):

- a. 1918 He taught manual workers in the evening.³
- b. 1919 During the May Fourth Movement he set up Problem Discussion Groups.
- c. 1920 He set up a study group in his native village of Shaoshu.
- d. 1921 He set up a Self-Study College which included group discussion and self-study (subsequently, after the government had closed down this college in 1923, many self-study institutions were set up in other cities).⁴
- e. 1922 The Mass Education Movement for workers and peasant basic literacy.
- f. 1927 The Self-Study Movement in guerilla bases.
- g. 1928-1933 The Jiangxi Soviet period included regular and irregular schools for adults and children. There was also a self-study University (Hawkins, 1974, p.145)
- h. 1936 The Red Army University espoused the idea (among others) of the classroom being anywhere.⁵
- i. 1937-1949 During this period spare-time education was encouraged. Self-study groups were set up and learning by doing was encouraged.⁶

As Chu (1980, p.22), notes: "Spare-time learning, down-to-earth teaching and self-instruction were among Mao's innovations". Mao claimed that informal learning was important and possibly more effective than formal learning (Chu, 1980, p.80). The instances of self-education and self-study listed above are important because these experiments were prototypes for Mao's later ideas (Kwong, 1979, p.43); for example, the encouragement of learning organised outside conventional classrooms during the Yanan period.⁷ Another indication of the importance to Mao of self-study was the way he extolled those who had become educated without going through formal schooling; for example, Confucius, Benjamin Franklin, Abraham Lincoln (Chu, 1980, p.80), Li Shih-Den (sic), Tsu Ching Chih (sic), James Watt, Gorky (Wong, 1974, pp.23-24). Examples of individuals who have improved themselves and made important contributions to work on the basis of self-study are still given today, whereas Mao's policies for conventional education have been largely disregarded.⁸

Both Mao's experiences and his views on education point to his support and belief in the role of non-formal education (Chu, 1980, p.80). In particular he advocated an important role for self-study, which arose both from his ideas on learning and on the link between theory and practice.

Mao's views on learning

These ideas on learning stem from his concept of the nature of knowledge, his view of people ('man'), and his view of the integration of theory and practice. The nature of knowledge he related to action by emphasising the application of knowledge and the principle of 'doing-knowing-doing'. He viewed knowledge unrelated to action as of no use (Chu, 1980, p.134). His view of 'man' was of a self-conscious, self-determining person with an open questioning mind and interested in a wide range of subjects (Price, 1977, p.332). The integration of theory and practice stems from the view of knowledge and the need to constantly test theory against practice. In terms of learning this implies not learning abstract theory, nor only learning about practice. The significance of this is greatest in the educational policy of combining education and productive work, which I will deal with below.

Although Mao said little directly about learning methods,⁹ the educational institutions which were inspired by him have a well developed rhetoric. His explicit teaching referred to the need to economise on the amount of lecturing, indeed to use handouts rather than have students taking elaborate notes. This released students to think about what was being taught, gave the teacher the role of producing materials, and allowed the students to study at their own pace (Hawkins, 1974, p.137; Kwong, 1979, p.51). An important element of this approach to learning was *self-learning* or *self-study*, and this came out of Mao's own experiences (Chu, 1980, p.314). This self-study was both a *means* to learning, as when teaching and learning methods were being defined for institutions, and an *end* in itself. The latter relates to students finding their own answers and solving problems themselves (Chu, 1980, pp.340-2; Price, 1979, p.22-3). Problem-solving was also seen as a method of learning, to develop independent thinking (Price, 1977, p.142) through asking questions (Fraser 1965, p.79). This creates the kind of person Mao is aiming at (his view of 'man'), and leads to innovation and change.

At this point it is worth developing briefly the influence of Mao's early experience, outlined above. In the inaugural statement on the setting up of the Self-Study University in 1921 Mao discussed the ideas of self-study and mutual study.¹⁰ However, he was developing ideas gained from the traditional education system of the seminary (*shuyuan* -

an academy of classical learning), whose method of teaching he contrasted with the modern schools of his time.¹¹ He wanted the content of the modern schools, but the study methods of the seminary, where students were not passive but actively involved in research. The Self-Study University intended to encourage learning when people were ready, to get them to study and think for themselves, to discuss and do research together, to allow students to take individual courses to suit their needs, and instructors to guide students not cram them. The courses studied were to be in arts and social science; it would be interesting to know if Mao would have advocated the same approach with science and technology courses.

Kangda (*Kangri jun zheng daxue* - Resist Japan Military and Political University), one of the most widely known of the Chinese Communists' cadre training institutions during 1937-1945, represented the model for learning methods which was to be held up both during the Cultural Revolution period and in the period following it. Hai (translated in Seybolt, 1973) provides us with an account of the learning methods, which include an emphasis on solving problems in terms of concrete conditions and self-study research.¹² Indeed self-study took up more time than class teaching, and even assessment was designed to encourage self-study, including assessment exercises done by the student away from the classroom - i.e. continuous assessment.

The learning methods were consciously tutored so that students developed a 'study life' (*xuexi shenghuo*) which would serve them after leaving university and allow them to continue learning when they worked as cadres (Seybolt, 1969, p.49). Thus students were schooled in how to listen to lectures, take notes, hold discussions, carry out research and read books. In part the reliance on the students' self-study was a reaction to the poor quality of teachers,¹³ and led not only to the development of student study skills, but also to the defining of a standard teaching approach (Seybolt, 1969, p.46). This approach was built around a cardinal teaching principle: "'opening the mind' (*qifa*) through one's own efforts" (Seybolt, 1969, p.37), which contrasted with traditional rote learning methods.¹⁴ Through this method (and because of the shortage of well qualified teachers) groups of students were led by 'education staff' (*jiaoyu ganshi*) who transmitted the leadership's principles, policies and course content (Seybolt, 1969, p.44). This resembles a 'tutor' role

in distance learning, especially given the education staff's task of understanding students' needs and problems.

The fact that *Kangda* was dealing with cadres, involved with political and military tasks of the anti-Japanese war effort after graduation, might seem to make the study methods adopted applicable only to such curriculum areas. However, other universities which followed *Kangda's* methods (such as Yanan University) had a wider curriculum including science and technology. Although other institutions were not as successful in implementing *Kangda's* methods,¹⁵ they could be said to have established this approach in other areas of the curriculum, in particular those relevant to China today.

Seybolt (1969, pp.121-123) also argues that there was a strong concern for technical competence and this was reinforced in the inservice education of cadres which existed through a number of campaigns from 1938-1945 (Seybolt, 1969, p.69). Again this education reflected the *Kangda* study approach through: the setting up of study groups, the appointing of a group leader to direct and sum-up study, an emphasis on studying alone (especially at higher levels) and the central defining of content and materials of study. Because of the inservice nature of study, two new elements were developed: a kind of 'study centre' idea, and an emphasis on study related to work. The 'study centres' were called 'circulating education stations' (*xunhui jiaoyu zhan*), and were established to serve cadres who could not attend lectures in the cities. However, only three were established (Seybolt, 1969, p.89).¹⁶ The importance of study related to work, encapsulated in the phrase 'study what you do' (*zuo shenma, xue shenma*), was a part of the policy of seeing education and study as part of work (Seybolt, 1969, pp.120-121).

Many of the features of learning are familiar to western pedagogy, but the overall strategy is particularly familiar to those involved in distance learning. Thus the use of active learning based on self-study, the use of centrally defined materials (and the use of supporting printed notes), the support of students by a 'tutor' and the formation of study groups, are all elements advocated in distance learning systems. However, within this was added another, less familiar, aspect which was also present in *Kangda*, namely group learning.¹⁷ Mao saw human interaction, especially between students, as an essential aspect

of learning (Chu, 1980, p.308; Hawkins, 1974, p.118), and in *Kangda* collective study took a variety of forms (Seybolt, 1973, pp.71-74). The main one was the 'study discussion meeting', where students would make and debate statements on the subject and under the direction of a leader (a student) draw a conclusion consisting of the essential points. The size of the group could vary from a few students to a very large number (a 'regional squad'). In preparation for small group discussions students would carry out collective reading, being led by a student with a high cultural level, and consisting of selective reading centred on research problems. Between these two types of group study was the 'forum', which was more flexible than a discussion meeting and a preparation for it.

The advantages of this collective study were seen to be:

- a it combined the results of the whole group's research of problems and allowed more sides of a question to be seen;
- b a deeper understanding was obtained and the educational levels of students were evened-out;
- c memory was strengthened by repetition in both lectures and discussions;
- d students obtained practice in speaking.

Thus we have a combination of individual and collective study, the latter having political significance for developing socialist consciousness, quite apart from any other learning objectives. All of the above methods (self-study, independent research, and group discussions) were mentioned in the Great Leap Forward and the Cultural Revolution.¹⁸ In 1986, on the 50th anniversary of the founding of *Kangda*, Li Peng (at that time Vice-Premier in charge of the State Education Commission) spoke about its teaching methods and commended it as a model to follow.¹⁹ As Seybolt (1969, p.68) notes, there is no empirical evidence to establish whether or not this model worked. Its significance to my thesis is that it developed a theory of how distance learning could proceed, 30 years before institutions like the British Open University were established. It is not my contention that these ideas were developed successfully, for indeed they have been largely ignored, nor that they should represent the basis for distance learning. Rather it is simply to point out there was a 'theoretical' basis for the development of distance learning, that could develop from within China, as opposed to being imported from the west. In

Chapter 5 I will consider what distance learning theorists have to say on learning, and in Part 2 will look at the some evidence of study methods within distance education systems in China.

COMBINING EDUCATION AND WORK²⁰

The Maoist line

This line stems from Marxist views on productive labour, that see labour as an outlet for creativity and skills (Sherman, 1972, p.35), in other words an essentially human activity, over and above any educational significance. It is not suprising then that within education the policy of combining study and productive labour has been of great importance in China.²¹ According to Price (1979, p.279) the objectives of this policy were threefold: to reduce the cost of education to the state by generating income for the school or college (*economic objective*); to create a love of labour, and break down the traditional division between mental and manual work (*moral and political objective*); to link theory and practice (*intellectual objective*). In describing the three objectives of combining education with productive labour Price (1979, p. 279) says:

By working the student helps to pay for his (*sic*) studies. Through work he comes to understand how his fellow men think and feel, and this can contribute to narrowing the class gap and the manual-mental labour gap. And finally, only by doing can he really know.

The moral and political objective has received the most attention in China, particularly by those supporting the Maoist line, and it stems from a concern with the role of education in the development of socialist consciousness. The intellectual objective is the most difficult to realize in practice and emphasises Mao's ideas on the theory-practice interaction. This objective also relates to Mao's vision of people increasing control over their own destiny (Price, 1977, p.345). Some (e.g. Wong, 1980, p.30) interpret this objective as a *pedagogic* one, because it has a pedagogic implication, namely the attempt to link the content and processes of work and study activities. It seems to me worth separating out the intellectual from the pedagogic objective. The theory-practice link of the intellectual objective has implications for pedagogy, for example to design problem-solving activities which allow students to apply theory, to recognize limitations of this application, and to

learn new kinds of thinking. A more direct pedagogic objective would be the understanding of production activities themselves. Sherman (1972, pp.73-74) reduces this to essential work skills. Smart (1963), however, elaborates the polytechnic principle, which lies behind this objective. As a component of general education, the polytechnic principle has three aspects:

- a. polytechnic horizon, that is a broad view of the whole system of production obtained by considering the four main categories of industries (mechanical, chemical, agricultural production and energy);
- b. processes of production, taught through a general study of fundamental scientific, technological and economic principles and a detailed study of the technology and organization of a specific enterprise;
- c. practical skills such as handwork.

Price (1979, pp.280-281) acknowledges this kind of complexity when considering the difficulties of realizing the intellectual objective (as he calls it). These difficulties include the fact that products and production methods change, but not the teaching content, and that students have access to a limited range of products and processes.

The emphasis placed on each of the objectives has changed over the years. In the Yanan period the economic conditions made self-sufficiency an imperative, although the integration of theory and practice was also important.²² In periods when the Maoist line dominated policy (the Great Leap Forward, and the Cultural Revolution) the emphasis was on the moral and political objective.²³ When concern for economic growth has dominated (1952-57, 1961-65, and post 1976) the intellectual and economic objectives have come to the fore. Yao (1972, pp.132-133), in detailing the instructional process in science and engineering programmes during the period 1949-57, describes a sophisticated range of production practice that would have in theory met the intellectual and pedagogical objectives of combining education and work.²⁴ Unfortunately this failed because of lack of co-operation between colleges and work units who would have received students. Indeed the failure of work-study arrangements in both 'red' and 'expert' periods was often because the tasks were trivial or menial (Yao, 1972, p.133), resulting in a contempt for labour (negating the moral and political objective), and not relating to the student's speciality (negating the intellectual and pedagogic objectives).²⁵

Although much of the concern is with bringing work into schools and colleges, bringing education into work situations is also of concern.²⁶ Thus when Mao praises the Shanghai Machine Tool Plant for its worker education base within the factory on a part-time basis, its main force is taken up in the regular higher education system where factories and farms are attached. During the Cultural Revolution this was as much to increase access to higher education of the children of workers and peasants as it was to improve the ideological or intellectual value of education. Rather ironically observers from outside China seem more sensitive than those inside to the position of education being introduced to the work situation (rather than the reverse) as being a more successful approach to the combination of labour and education (Kerr *et al*, 1978, p.23). The failure of programmes which introduce work to schools is accounted for by the fact that the function of schooling, as perceived by students and their parents, is undermined. Rather than transforming schools and colleges (and hence the students within them), they undermine confidence in either their quality or function.²⁷ Nor are all the objectives of combining education and work easy to achieve, except perhaps the economic one.²⁸ On the other hand China has won international recognition for its non-formal education (Sidel, 1982a, p.37) and its attempts to improve worker education (Kerr *et al*, 1978). A question for this thesis is whether such forms (in particular distance learning) are more successful at blending the objectives of the combination of education and work.²⁹

Social practice: education and work post-Mao

Social practice (*shehui shijian*)³⁰ seems to be the current term for the work-study activities that had been neglected as a reaction to the excesses of the Cultural Revolution.³¹ The idea appears to have become used in recent times from a Communist Youth League call for students to take part in social practice activities.³² Social practice covers a variety of activities and at times is linked with local strategies for economic development and regional development projects.³³ One version of it requires students to go off to camps in the summer and winter vacations and work in suburbs or rural areas on tasks as varied as acting as deputy secretaries to Communist Youth League committees, running sports for

rural youth, giving technical assistance and conducting investigations.³⁴ It also appears to include part-time work as waiters, barbers, typists etc³⁵ and in some cases those students who return to their home villages during vacations.³⁶

All of the objectives for work-study, discussed above, are reported at various times, though often with emphasis on one or two of them.³⁷ However, a major State Education Commission report indicates the need to balance the objectives.³⁸ What is important about the current policy is that there is a new slant on these objectives. So, for example: the economic objective also includes helping poor areas with no cash return to the higher education institution;³⁹ the political objective includes both getting involved in modernization and reform⁴⁰ and understanding conditions in the country.⁴¹ These new slants are also accompanied by a more sophisticated view of labour education. For example, there is a recognition of the need to avoid alienating students, so social practice activities are related to the interests of students studying different subjects.⁴² Indeed when He Dongchang, the Vice-Minister of the State Education Commission, was asked if social practice was the same as the "learning from industrial practice and agricultural production" that prevailed during the Cultural Revolution, he said it was not. His defence was that during the Cultural Revolution production work was based on an incorrect assessment of intellectuals and was a form of punishment, and also that now the intellectual objective was more important.⁴³ An example of the intellectual objective would be engineering and science students applying what they have learnt to production.⁴⁴ The main evidence of a more sophisticated approach comes from a State Education Commission report on how to improve production and social practice.⁴⁵ This is in contrast to the Cultural Revolution days, when the sole emphasis was on the moral-political objective.⁴⁶

The combination of productive labour and education has significance for distance learning because:

- a. the legacy of the Yanan period is still affecting policy by sustaining some of the objectives of combining education and work, showing continuity of the Mao line;⁴⁷
- b. conventional universities are still searching for methods to make their graduates conform to China's political and intellectual needs, such as a willingness to serve rural areas;

- c. social practice has a role in overcoming the theory-practice division, by allowing students the opportunity to apply the knowledge they learn in their courses to a real context;
- d. it could help to produce graduates who understand enough about production (and the like) related to their speciality, that they can successfully find a place in work units.

When distance learning employs part-time or spare-time study for those already in employment it may have an advantage over conventional higher education. It is because conventional higher education is separated from the world of work that it needs to employ activities such as social practice. In later chapters I will examine the extent to which distance learning students are at an advantage over bridging the theory-practice divide.

ACCESS

Since the early Yanan days the communists were determined to remove the class privilege of access to education, a situation that had existed despite the Confucian idea of social mobility (Lo, 1978). Their attack on the elitist education system, which reflected the prevailing class structure, resulted in policies aimed at opening up access to the proletariat (Chu, 1980, Chapter 1). The 1954 Constitution encapsulated this by asserting *education as a right* (Chu, 1980, p.88). *Elitism* was a problem in these early days (Selden, 1971, Chapter 6), and has remained so over the various periods of policy change.⁴⁸ At higher education level the introduction of labour universities in the mid-1960s (Chou, 1976; Barendsen, 1964, p.39), and the promotion of workers' colleges in 1968 (Price, 1977, p.89), were attempts to deal with the access for those of worker and peasant origins. The access to regular universities was changed by doing away with entrance examinations and using selection criteria which favoured those from worker and peasant families. Although this policy was reversed in 1978, with the promotion of elitism, equality remained important. Again therefore there are competing priorities in objectives: the political objective of *mass access* through open entry, and the economic objective of training the labour force for *economic development* (Hawkins, 1971, p.21-4). This competition has led to the problem of balancing equality and quality (Henze, 1984a).

The political objective led to real practical problems, which are of importance to my later discussion of distance learning in Chapter 5 and Part 2. First, if a more open entry policy

is implemented, then universities have to cope with a varied intake, in terms of ability and certainly achievement.⁴⁹ This necessitated remedial classes for many students, and teachers complained about having to provide such support (Ginsburg, 1976).⁵⁰ Second, any attempt to remove privilege implies a massive increase in provision, and this presents acute problems especially at the higher education level, not only with regard to creating sufficient capacity, but in the government meeting the huge cost.

Half-work, half-study schools and colleges were in part a response to these latter problems of cost and capacity, while at the same time increasing access (Munro, 1967, p.255; Barendsen, 1964, p.1-2; Unger, 1982, Chapter 3; Shirk, 1978, pp.7-8).⁵¹ By the time of the onslaught of the Cultural Revolution Liu Shaoqi had instituted the 'two-track system' with high quality regular schools for the able students and lower quality half-work, half-study schools for the rest.⁵² The period of the Cultural Revolution, in which Liu's elitist line was repudiated, saw an attempt to make all schools and colleges half-work, half-study (Bietz, 1972, p.64) and an increase in the numbers in higher education after the disruption of the initial years (Hayhoe, 1984b, pp.168).⁵³ The two-track system can be seen as a compromise between the elitist line of Liu Shaoqi, and the mass education line of Mao, a compromise which has existed to this day, although the adult education sector in general has replaced the half-work, half-study institutions.

The development of the non-formal sector has both theoretical and practical importance quite apart from it being seen as a compromise. On the theoretical side it is a manifestation of Mao's idea of seeing learning as more than schooling (Chu, 1980, p.327), and in this sense is a step towards *open learning*.⁵⁴ Open learning is a concept often raised in relation to distance learning. The practical significance of this alternative route through higher education is that it can satisfy the need for mid-level technicians (Hawkins, 1971, p.33; 1973, p.116; 1974, Chapter 9), rather than the high-level labour produced by conventional universities, because of the lower level of intake and of the curriculum presented.⁵⁵

The pre-occupation with access detailed above is almost exclusively with equality of the classes. Much less has been discussed, or provided a motivation for policy, concerning

geographical inequalities, although recent discussion has focused upon minority groups.⁵⁶ Distance learning has significance for these inequalities, as later chapters indicate.

EDUCATION AS INVESTMENT

Seeing education as investment is an important element in Chinese official thinking in the post-Mao era. Human capital theory underlies this thinking, and it has a well documented theory and a substantial body of empirical studies associated with it. In this section I will explore this theory and its findings as they relate to Chinese policy, as well as its problems and side effects. Such a theory and its findings throw into relief some of the policy decisions of the Chinese government. More important it provides a rationale for the use of distance education in providing higher education, a rationale that is only partly appreciated by the government.

Throughout the period since liberation there have been ideological arguments within the Chinese leadership about the interaction of 'productive forces' and the 'relations of production'. These arguments have resulted in different economic and educational policies. Those who favoured stressing 'productive forces' were concerned about economic development, and those who stressed 'relations of production' were concerned about ideology and the development of socialist consciousness.

Support for human capital theory

In the periods when the focus has been on economic growth (i.e. early 1950s and 1960s, and currently), education has been geared to labour force needs: it was assumed during these times that investment in education would pay off in the form of economic growth. For example, the improvement in technological and scientific knowledge of the work force will give rise to greater productivity.⁵⁷ A recent government statement on the reform of the educational system stresses the need to improve the skills of the workforce,⁵⁸ something supported by the World Bank (1983) and which forms the basis for their loans to China.⁵⁹ Well known contemporary Chinese economists argue that the key to China's socialist modernization is labour productivity, which in turn requires the use of advanced science and technology. Socialist relations of production, they argue, cannot rest

indefinitely upon backward productive forces (Xue, 1981, Chapter IX). Further this is a position with which Deng Xiaoping (and Liu Shaoqi before him) has been associated, and that lay behind the reforms since 1977, in particular since the 1978 conferences on education and science and technology.⁶⁰

Human capital theory

The underlying theory of this position, put crudely, is that the improvement of the workforce through education should be seen as a capital investment.⁶¹ It is, however, one of many theories about the relationship of education and social and economic change and not without difficulties.⁶² Research based on this theory indicates that, although social rates of return of education are greater than for other kinds of investment in developing countries, it would be better invested in primary education rather than vocational or higher education.⁶³ General education gives a better rate of return than specific education, including scientific and technical education at rural level.⁶⁴ These two findings did not fit well with policies of the Chinese government in the early 1980s. However, the research also shows that on-the-job training gives better rates of return than higher education, *supporting* a more recent policy.

Some of the criticisms and effects of human capital theory, that have led to disillusionment with this approach to educational policy on the part of some, are relevant to China. It is assumed that economic returns are the basis for creating the demand for higher education. But demand is apparently not rationally determined, with the desire for upward mobility creating more demand than the rates of return warrant (Sobel, 1978, p.294).⁶⁵ Advocates of the theory also assume that the labour market is perfect so that those with the best education get the best jobs. Besides difficulties with substantiating the theory there are problems and 'side-effects' associated with investment in education along these lines. The most pressing problem for many nations is the escalating costs of education. These eventually make planners rather cool about such investment especially when as a consequence less is directed towards the manufacturing and agricultural sectors, which may have better rates of return.⁶⁶ Also in the case of higher education the costs are greater and starve lower levels of funds leading to dropout. The side effects include the

oversupply of educated youth: who cannot therefore be usefully employed; who represent a waste of resources; and who are left with unfulfilled aspirations. This is a side effect that China shares with socialist and capitalist countries alike, although this is a post-secondary rather than post-higher education problem.⁶⁷ As Dore & Oxenham (1984) argue, schools simply become a selection device for jobs. In doing so they may suffocate the very qualities needed for development, and assumed by the human capital theorists to be endowed by education. Pepper (1984) paints a depressing picture of the secondary education system in China which is distorted by its function of selecting young people for higher education (which in turn bestows a guaranteed place in the job market). Another side effect, that of escalating qualifications, is largely avoided at present in China because of government control over job assignment and salary levels in the state controlled sector. Job assignment and the possibilities of a job 'market' in China are, however, important factors in the relationship between education and the economy as will become clear in later chapters. The problem becomes less one of the escalation of qualifications, but of misallocations, that distort the 'perfect labour market' assumed by human capital theorists.

The technique of labour force planning (manpower planning), important in human capital theory, is also the subject of criticism that is relevant to China. These criticisms point to the difficulty in establishing that particular jobs need particular levels of qualifications. Although employers may say they need a graduate, it is unlikely that sufficient data can be gathered (from job analysis) to ensure that this is so. Thus a 'schedule of correspondence' is assumed between this level of education and the level of the job (Dore & Oxenham, 1984, p.9). Much of this argument refers to the formal education system, and it is acknowledged that on-the-job training and non-formal education generally may be a way of avoiding some of the difficulties (Simmons, 1980, p.237). I turn to the labour force planning as one of the techniques used in China.

Estimating the needs of the economy in China

Two basic sources for determining the future requirements of high-level personnel are employed: an investigation of labour shortages and the requirements of the economy; comparisons with other countries. The State Economic Commission's five-year social and economic development plans, and the annual admission plans for higher education (done in conjunction with the State Education Commission) are based upon meeting the requirements of various sectors of the economy. Thus in 1977 when Fang Yi, the then minister in charge of the Science and Technology Commission, made predictions for the 1985 requirements for professional research workers (and hence the supply of graduates in science and engineering), it was based on estimates of the existing pool, the shortages that were apparent (Suttmeier, 1980, Chapter 3), and growth rates of the economy. Such labour estimates are carried out by surveys through what was the State Planning Commission (and its provincial equivalents).⁶⁸ At the time Fang Yi was giving his estimates it was recognized that long-term planning was needed to link education to science and technology requirements (Suttmeier, 1980, Chapter 2), something that has been reiterated more recently.⁶⁹ This indicates that the knowledge upon which these plans and forecasts are based is incomplete, causing problems for the job allocation system, as I will show in Chapter 3.⁷⁰

Surveys of labour requirements are more likely to be useful to short-term planning, whereas long-term planning relies upon predictions of economic growth. ter Weele (1983) illustrates this approach when he considers assumed growth rates of annual industrial and agricultural output in China, and the growth rates these imply in the industrial and agricultural labour forces. (He also makes assumptions about service sector growth.) From these calculations he can estimate the labour force requirements and the rate at which the higher education system must grow to match these needs. Often the growth rates of the economy are over-optimistic leading to a surplus that cannot be absorbed, and in some circumstances the graduates become a disaffected element in society (Sobel, 1978, p.295).

ter Weele also uses the second of the basic sources for determining future high-level personnel requirements, that of international comparisons. He considers the percentage of

the labour force with higher education in a number of developing Asian countries showing that China has the lowest figure, implying that they need to increase it.⁷¹ This is also the approach taken by the World Bank, in addition to the labour force surveys. In view of the role of the World Bank in helping China develop higher education,⁷² it seems reasonable to assume that the Chinese government take a similar approach.⁷³ This is reinforced by the fact that Zhou Beilong of the State Education Commission used such international comparisons, though in the context of arguing that using models of *developed* countries (rather than developing ones) is likely to *over-estimate* forecasts of what China can expect to achieve.⁷⁴ Indeed he argues that China has actually exceeded its requirements if the level of economic development is taken into account,⁷⁵ and that the increase in higher education should be controlled. The expansion has in his view been too fast and resulted in a decline of quality, a view that informed education policy in the latter half of the 1980s.

The relationship between education and the economy

Part of the problem of determining the way education affects the economy is that it is not clear whether education drives the economy or is driven by it. There is of course a half-way position where they are seen as closely inter-related. In 1978 Deng Xiaoping certainly seemed to favour the first view, that education determines economic growth:

We must train workers with a high level of scientific and general knowledge and build a vast army of working class intellectuals who are both 'red and expert'. Only then will we be able to master and advance modern science and culture and new technologies and skills in every trade and profession. Only then will we be able to attain productivity of labour higher than that under capitalism....
(Deng, 1984, p.120)

In the report of a symposium in 1988 on theories in education the three positions of the relationship of education and the economy were recognized, and in the context of vocational education there was a recognition of the intermediate position.⁷⁶ Thus as production, and science and technology develop, so does the need of workers for general education. This kind of stance was argued for within the context of increased costs of education that caused a crisis in education. In discussing the Eighth Five-Year Plan Li Tieying, Vice-Premier of the State Education Commission, hedged his bets saying that spending on education should increase so that education and the economy could advance

in a co-ordinated way, with education slightly ahead of the economy!⁷⁷ However, there are still advocates of the view that the economy is driven by education.⁷⁸

CONCLUSION

Some of the issues examined here conflict, most notably, with the ideas on access and education as investment. This is certainly true in higher education, but interestingly not with regard to primary education, where human capital theory suggests expansion and hence would support increased access (Sobel, 1978, p.283).

For higher education any attempt to increase access, by whatever means, will increase costs, and will not give the kinds of returns that the government wants. Underlying this is the conflict of equality and quality, and Robinson (1991) takes the government to task for backing down on equality in an effort to produce quality for economic development. She does, however, compliment them for their efforts at adult education, notably the RTVU. But she bases this partly on my earlier work which was in a more optimistic period. As I will show, the government did not capitalize on distance learning. The side effects noted above are evident in the government's attempts to stem the expansion of higher education while faced with a huge demand for it.⁷⁹ Combining education and work, on the other hand, has continued as a theory underpinning policy even though economics and not politics is in command. The policy of social practice was seen as a way of producing a graduate more suited to the economy (the intellectual objective). For adults in higher education (including those in distance education) this should be less of a problem because they are better suited to the needs of the economy. More recently social practice has been used in a different way, in response to the events of June 1989, that reinforces the echoes of the past.⁸⁰ In the next chapter and Chapter 4 I will explore how the ideas on access and education as investment take shape in policy and practice in education. These ideas and policies form the context for distance learning.

Mao's views on learning as I have explored them are relevant to distance learning, although there is little evidence of them in current discussions. Self-study is taken up at middle school level, but not using Mao's ideas;⁸¹ and the term is used very vaguely at higher education level. As I said earlier aspects of learning, such as self-study methods and group learning, can be exploited in distance learning. Thus there is a 'theory' that those in China could call upon as an indigenous one, rather than looking only to other countries' ideas. It is also evident that many of the failings of the conventional higher education system indicate that the lessons of Mao's ideas have been ignored, as the next chapter shows.

NOTES

1. The Chinese term for 'independent study' is *zixue*, which literally means 'self-study', but without any psychological implications of studying oneself. However, I will use the term 'self-study' as it is the most common translation by the Chinese themselves, and is better than the alternative translation of 'self-taught'.
2. For example, Price (1977) is a major study of Mao's ideas on education and is almost exclusively about schooling. Similarly, although Gamberg (1977) devotes her final chapter to aspects of non-formal education (including its political and economic significance), the bulk of her pro-Maoist account and analysis focuses upon the formal system of education. This may of course reflect the pre-occupation of the 'authorities' who carefully guided foreign visitors around schools, factories and communes. To be fair she does, in that final chapter, recognise the political and economic significance of such things as self-study, but does not examine non-formal education as a whole. See, however, Lin (1989) for an application of Mao's thinking to adult education that takes account of his early experiences.
3. In a 1917 advertisement for a workers' evening school which Mao ran (at an earlier date than Chu records) the use of lecture notes being issued to students is indicated, and a point is made that the spare-time study does not interfere with work (*FBIS JPRS-71911-1, Collected Works of Mao Tse-tung (1917-1949)*, Volumes 1 & 2, pp.34-37).
4. There is some confusion in the literature over two "Self-Study Universities/Colleges" set up by Mao. Chu (1980) on page 16 mentions a "Self-Study College" set up in 1921, and on page 81 he notes that Mao established a "Self-Study University" in Hunan in 1923. A similar difference occurs in Hawkins (1974, pp.82 & 99). It has to be assumed that these are in fact separate institutions. Lin (1989, p.5) only mentions 1921, and gives more details than the other authors.
5. In a letter from Mao to Lin Biao an emphasis is put on self-study as an end itself. Later I will consider self-study as a *means* and as an *end*.
6. In a description of *Kangda* (*Kangri jun zheng daxue* - Resist Japan Military and Political University), one of the most widely known of the Chinese Communists cadre training institutions during 1937-1945, it was reported that self-study should be greater than the time spent in class (Seybolt, 1973, p.43).
7. In the regulations covering the Yanan period the importance of self-study is recognised, as at *Kangda* (see note 6) it was seen to be more important than formal teaching (Fraser, 1965, pp.79 and 81).

8. One such example is given in *ZGJYB*, No.752, 19 September 1989, p.3. These examples not only show the importance of self-study, but also the use of individuals as models for others to aspire to. See Lo (1982) for a discussion of model emulation as part of non-formal education.
9. Hawkins (1974, p.4) notes that "Seldom has Mao devoted a major work to the problems of education, but contained within his numerous writings are several lengthy sections related to a variety of educational issues." Both Hawkins (1971, p.10) and Seybolt (1971, p.642, note 2), however, attribute a major role to *On Practice*, an essay drawn from a speech in 1937 (translated in *Chinese Education*, No.4, Winter, 1970-71, pp.265-288, from *Selected Works of Mao Tse-tung*, Vol.1, Peoples' Publishing House, 1953, pp.271-286). Most of Mao's views that are analysed stem from those on knowledge; for example see Lin (1989, Chapter 4) for such an analysis in the context of adult education.
10. *FBIS JPRS*, 71911-1, pp.34-37. Both of these ideas were to be important in *Kangda*, dealt with next.
11. Hayhoe (1984b) argues that Mao owes much to traditional Chinese ideas. It is also true that Mao was not unique in his educational thinking at this time in China. Tao Xingzhi, influenced by John Dewey, advocated many similar ideas and anticipated many of the measures the Communists were later to implement (Seybolt, 1974; in this issue of *Chinese Education* some of the writings of Tao are translated).
12. I have used the translation of Hai in *Chinese Education* edited by Seybolt (1973), as well as Seybolt's Ph.D. thesis (Seybolt, 1969). In fact Seybolt (1969, Chapter III) made extensive use of the publication edited by Hai (published in 1939), using the original Chinese language version, credited to the Wuhan Mobilization Society (*Dungyuan She*) of which Hai was a member. Wang Hsueh-wen (1975) also gives an account of the methods at *Kangda*, based on a large number of source documents, though the treatment is more general, and strangely makes no reference to Seybolt's work.
13. Seybolt (1969, p.37) says that because teaching faculty were of poor quality *Kangda* could do away with lectures and didactic instruction, and hence first class lecturers were not needed (p.44), i.e. turning adversity into a positive asset.
14. Seybolt describes the idea of 'struggle' as at the centre of this.
15. This is implied by Seybolt (1969, p.157), the result of the staff being poorer quality than in *Kangda*.
16. They were also used in the Cultural Revolution to aid the training of teachers in remote and mountainous areas. ('A "mobile university" for the training of teachers with greater, faster, better, and more economical results', *Hongqi*, 1971, No.6, pp.84-88; translated in *Chinese Education*, Vol.V, No.1-2, pp.182-193.)
17. Lo (1978, p.119) claims that small study-group methods have their origin in a Confucian heritage of methods of intellectual discourse, which were adopted by the Chinese communists.
18. In the Great Leap Forward the labour universities were modelled on the Yanan period (Chou, 1976,p.67). Articles from the Cultural Revolution period also show this legacy: 'Advance along the glorious path of Chairman Mao's "July 21" directive', Communist Party Central Committee of Shanghai Machine Tool Plant, *Chinese Education*, Vol.5, No.1-2, 1971, pp.27-46; 'We must guide independent study, not "cram the students full of information"', The Education Revolution Group of Fudan University, *Chinese Education*, Vol.8, No.1, 1974, pp.78-85; 'Teaching methods for Science and Technology', Tsinghua University Revolutionary Committee, *Chinese Education*, Vol.VI, No.2, 1973, pp.39-48. I also found self-study approaches advocated when I visited a variety of universities in 1973 (McCormick, 1974, p.136).
19. *SWB FE/8281/BII/2-7*, 10 June 1986. Li Peng specifically mentioned the reading of books, integrating theory and practice, the role of basic knowledge and the importance of not ignoring book knowledge.
20. This topic has been well researched especially within the context of half-work, half-study programmes: Barendsen (1964); Cheng (1958); Fraser (1965, pp.283-300); Kerr *et al* (1978); Munro (1967); Price (1973). It has also been the subject of a Ph.D. thesis (Dorn, 1973), and a comparative study of Mao and Gandhi (Zachariah & Hoffman, 1985).

21. In fact Lu Dingyi, a former Minister of Education, traced this back to Owen and Fourier (Lu, 1962). A number of authors outside China have traced other origins of the combination of work and education. Gillespie & Collins (1987, p.13), in an international context go back to Rousseau (1817-88), onto Fourier (1872-1837), Owen (1771-1858) and Marx (1818-83), and then to Russian thinkers starting with Krupskaya (1869-1939). Price (1977, pp.187-189), in discussing Russia and China goes back to Krupskaya and Mao. While it is possible to link these writers it is probably going too far to suggest that they motivated policies in China. To take one example, Marx was concerned with introducing education to children working in factories (in England), and with the need to transform workers to overcome the division of labour in capitalist industry of the mid-nineteenth century in Europe (Marx, K., *Capital*, Vol.1, Chapter 15 (Pelican Marx Library edition, pp.613-614), Harmondsworth, Penguin, 1976). China's revolutionary leaders were dealing with an altogether different situation!
22. The combination of education and labour had in fact become policy at the Second National Soviet Congress in 1934, but Dorn (1973, p.78) claims the educational significance of the theory-practice link was spelt out clearest in Mao's Yanan article *On Practice* in 1937. Price (1977, p.192) says that Mao's direct references to linking schools with productive labour first appeared in 1957. Lu Dingyi writing in 1958 (Lu, 1958, p.294) quotes a statement by Mao in 1934 which makes a specific mention of combining education and productive labour, but with no further theoretical discussion. Price (1984, p.85-6) says that this combination lacked any theory. Seybolt (1969, p.62) claims that the policy at *Kangda* was so implicit that when Lu Dingyi spelt out the combination of labour and education in 1958 it was presented and received as a new policy. Certainly the discussion of the production movement at *Kangda* in Seybolt's source (1973, pp.105-109) only discusses economic and political objectives, and then in fairly straightforward terms with no reference to theory and practice, for example. Bietz (1972, p.72), in depicting a struggle between Mao and Liu Shaoqi, argues that Lu (as a supporter of Liu) saw part-time study as a transition phase (and hence of little theoretical significance?), though neither the extracts he quotes, nor my reading of Lu's 1958 article confirm this analysis.
23. During the Great Leap Forward those implementing policy saw half-work, half-study schools as a way of contributing to production, i.e. fulfilling the economic objective (Kwong, 1979, Chapter 6).
24. There were three forms of production practice: observation practice, involving visiting production centres; speciality productive practice, where the student participated to get used to industrial operations and to use their speciality; graduation practice, involving working as a technical assistant to get familiar with techniques etc and collecting data for the graduation thesis/design. The graduation design was another form where data from the production practice could be put to use in solving a problem relating to national economic construction.
25. Seybolt (1969, p.40) notes that the later rationalization of the lofty ideals of combining labour and study at *Kangda* could not have been achieved through the little bit of gardening students did during their eight-month study period.
26. I have already pointed out that Price (1977, Chapter 5) only concerned himself with *schooling*, including when considering the combination of education and labour. However, in a later article he does note the variety of combinations of labour and schools (Price, 1984).
27. This is the thrust of the analysis of Zachariah & Hoffman (1985), the conclusion of Unger (1982), and the theme of Price (1977), referred to earlier. Price (1979, Chapter 9), in his consideration of education after the death of Mao, concludes that the Cultural Revolution failed to effect structural change because of a lack of deep-seated change in attitudes and in the system. Indeed the steady erosion of the Maoist line started in the early 1970s under the influence of Zhou Enlai who was concerned with the impact of falling standards on the long term prospects for economic development (Hayhoe, 1984b, p.159), continuing a theme he started in the early 1950s (Dorn, 1973, Chapter 4).
28. Price (1979, pp.280-1) concludes that though it is easy to achieve the economic objective, the moral and political one may not actually change attitudes and thinking, and the intellectual one is very difficult to achieve (a point I made earlier when discussing Yao, 1972). Shea (in Kerr *et al*, 1978, p.30) says that empirical evidence is needed to examine whether learning is helped by work.

29. This is not to imply that introducing education to work has any more theoretical heritage (or status) than introducing work to education. It is important to reinforce the point that there is no natural link between such heritage and policies adopted in China (See note 21).
30. The term 'production practice' is also used.
31. *SWB FE/7858/BII/6*, 25 January 1985.
32. This call is mentioned in: *FBIS JPRS-CAR-87-016*, pp.112-3, 8 July 1987. However, I have only been able to trace a reference to a circular from the All-China Students' Federation encouraging social practice week activities from 4-11 December, 1983 (*SWB FE/7511/BII/10*, 8 December 1983). The State Education Commission issued guidelines for middle and primary schools in March, 1983, and again in June, 1988, though these were for work-study activities not specifically social practice (*SWB FE/7270/BII/7-8*, 11 March 1983; *FE/0177 B2/5*, 14 June 1988). In 1986 a Communist Youth League official talked about social practice as if the idea had a long history, but that it had been developed since the 1980s (*SWB FE/8453/BII/9-10*, 31 December 1986).
33. *SWB FE/8453/BII/9-10*, 31 December 1986.
34. *SWB FE/8607/BII/2*, 30 June 1987. Specific examples given are: to provide technical services for village and town enterprises, small and medium enterprises and rural areas - projects in technical transformation; technical training; investigations and design related to students' subjects e.g. the design of a device to guard against power cuts for machines (*SWB FE/8453/BII/9-10*, 31 December 1986).
35. *SWB FE/7823/BII/12*, 11 December 1984; *FE/7881/BII/7*, 21 February 1985; *FE/8643/BII/9*, 11 August 1987; *FE/0036 B2/6*, 30 December 1987; *FE/0685 B2/7*, 10 February 1990.
36. *FBIS JPRS-CAR-87-016*, pp.112-3, 8 July 1987; *SWB FE/8458/BII/7-8*, 6 January 1987.
37. Economic objective stressed in the context of school work-study: *SWB FE/8236/BII/6*, 18 April 1986; *FBIS JPRS-CPS-87-010*, pp.45-6, 27 February 1987. Moral-political objective stressed in: *SWB FE/7511/BII/10*, 8 December 1983; *FE/8458/BII/7-8*, 6 January 1987; *FE/8460/BII/7-8*, 8 January 1987; *FE/8468/BII/15-16*, 17 January 1987; *FBIS JPRS-CAR-87-046*, p.112, 10 September 1987. Intellectual objective stressed in State Education Commission's guidelines on work-study (see note 33) and in: *SWB FE/8499/BII/4*, 23 February 1987, and *FE/0685 B2/7*, 10 February 1990.
38. State Education Commission report on production, social practice for students (*FBIS JPRS-CAR-88-040*, pp.42-3, 26 July 1988).
39. *SWB FE*, 30 June, 1987; *FBIS JPRS*, 8 July, 1987.
40. *SWB FE/8468/BII/15-16*, 17 January 1987.
41. *FBIS JPRS-CAR-88-040*, pp.42-3, 26 July 1988 (State Education Commission report). This had great significance following the events of June 1989, as I will show in Chapter 3.
42. *SWB FE/8566/BII/4-5*, 13 May 1987. A survey of almost 9000 students in 12 higher education institutions in Shanghai revealed their interest in developing skills, in contrast to book knowledge, and work-study programmes were seen by them as one way of achieving this (originally published in *JYYJ*, No.11, November 1986, pp.76-78, translated in *FBIS JPRS-CPS-87-011*, pp.70-74, 13 March 1987).
43. *SWB FE/8574/BII/2*, 22 May 1987.
44. *SWB FE/0685 B2/7*, 10 February 1990.
45. First, difficulties are acknowledged, such as: in getting sufficient training places; having no clear demands in the practical training, ineffectual guiding control, and weak ideological and political work (so that students regarded social practice lightly); units asking for high fees for training the students. Second, this recognition leads to specific suggestions for improvements: clarify the aims; improve administration; improve the experience e.g. by closer links between units and colleges; match costs of running social practice and economic benefits of it. (*FBIS JPRS-CAR-88-040*, pp.42-3, 26 July 1988.)

46. However, shadows of the past remain. In the interview of He Dongchang referred to earlier, he was asked if social practice activities were related to the student unrest (in 1986-1987). His reply did not make the link, but clearly the questioner did (SWB FE/8574/BII/2, 22 May 1987). Also in calls to oppose bourgeois liberalization the role of social practice was noted (SWB FE/8503/BII/3, 27 February 1987; FBIS JPRS-CAR-87-059, p.23, 1 December 1987). As I will show in Chapter 3 the events of 1989 in the Tiananmen Square may have given some impetus to political objectives.
47. Indeed Gu Mu actually referred to social practice as in the Yanan tradition in a speech for *Renmin Daxue* students going off to social practice activities.
48. Selden (1971, Chapter 6) notes that an issue in the early 1940s was mass versus elite education, and Kerr *et al* (1978, 'Preface') record that modernization versus egalitarianism was a contradiction in the post-Mao period that they observed (with the emphasis on modernization at the expense of egalitarianism). Even during the early 1970's, when the Cultural Revolution policies stressed egalitarianism, elitist tendencies had crept back (Hayhoe, 1984b, p.169, p.294 - footnote 61).
49. Here I take *achievement* to reflect the educational level reached by a student, and *ability* to refer to a student's capacity to benefit from higher education. These are obviously related but there is no assumption that ability is innate.
50. Interestingly this was seen in a positive light during the Cultural Revolution, when it was suggested that workers with production experience had much to contribute to make up for their lower conventional educational level (Chinese Communist Party (CCP) Committee of Shanghai Machine Tool Plant, 1971, p.39). In *Kangda* a wide range of educational levels existed among the students and this was overcome through collective study, with good students helping those less fortunate (Seybolt, 1969, p.38).
51. They also had the political-moral and intellectual objectives discussed in the earlier section.
52. In fact this division had existed in the Yanan days (Seybolt, 1971, p.663). Unger (1982, Chapter 3) points out that following the failure of the Great Leap Forward, many half-work, half-study schools had collapsed, and most had closed by 1964. However, an explosion of them followed a Liu Shaoqi directive in that year.
53. Hayhoe says that although the numbers in conventional university courses took a long time to pick up to pre-Cultural Revolution days, there was a large increase in short-term courses. The figure for those doing degree and diploma courses (*benke* and *zhuanke* respectively) in 1965 was 674,436 and this was not exceeded until 1978 when it was 856,322 (*Zhongguo Dabai kequan shu chubanshe*, Beijing, 1984).
54. Indeed Hawkins (1973) sees Mao's views in terms of 'society as a school', resembling Illich's de-schooling ideas.
55. Chapter 4 will show how distance learning is now being used as a way of satisfying the demand for higher education for poorer quality students studying diploma courses (*zhuanke*) rather than the longer degree courses (*benke*) of universities.
56. At the NPC in June 1988 representatives of the minority groups did voice concern about the neglect of this aspect of education (SWB FE/0204 B2/3-4, 15 July 1988). Kwong & Xiao (1989) give the most detailed account of the success of Chinese government policy on minority education.
57. This is an argument by Luo (1982), giving a current Chinese view, though of course he recognises the classic Marxist interaction of productive forces and relations of production.
58. *Decision of the CPC Central Committee on Reform of the educational system*, Xinhua, Beijing. 28 May 1985. (Published in FBIS JPRS 30 May 1985).
59. See Hayhoe (1989b, Chapter 7) for an account of the relationship of the World Bank and China's higher education policy.
60. See Deng Xiaoping's speeches at these two conferences: *Speech at the opening ceremony of the national conference on science* (Deng, 1984, pp.101-116) and *Speech at the national conference on*

education (Deng, 1984, pp.119-126). Herschede (1979) examines Deng Xiaoping's view of industrial development (built on Zhou Enlai's view) and the role of science and technology and the reforms in higher education that resulted. The idea of education as an investment has been reiterated since that time (*SWB FE/7605/BII/12*, 30 March 1984; *SWB FE/7714/BII/4*, 6 August 1984). However, in a more recent article the author complains that despite Deng's support of education as a productive force, most party and government leaders still see education as consumption, not investment (*FBIS JPRS-CAR-89-027*, pp.63-4, 29 March 1989).

61. See Fagerlind & Saha (1983) for a discussion of human capital theory. They note that, although the policies of advanced socialist societies are the same as those of capitalist countries in following the dictates of human capital theory (in the 1950s and 1960s), the former are distinguished by the emphasis upon ideology and bringing about the "new socialist man" (Fagerlind & Saha, 1983, p.228). This seems less true of China in the post-Mao era.
62. In particular it ignores social-psychological aspects (see Foster (1987) for a review of these). These aspects might also go some way to explaining how education works in improving economic development (a question I raise shortly). See for example Dore & Sako (1989), on how the Japanese education system is effective even although it is highly academic.
63. See Psacharopoulos (1988) for the most recent review of investment in vocational education, and Psacharopoulos (1991) for higher education.
64. Fang Yi advocated science and technology education related to agriculture for farmers (*SWB FE/7271/BII/6-7*, 2 March 1983), and this is the basis of the Prairie Fire Programme for rural area which I will deal with in Chapter 5. See Hicks (1987) for a recent review of 'rates of return' studies.
65. There is also the problem of highly trained people not being prepared to leave the city, even although they are unable to get a job commensurate with their training.
66. Rosen (1985a) notes that at a local level in China decentralization meant that spending was diverted from education to other sectors.
67. Although (middle) school and university graduates are assigned to jobs, the flow of the latter is so well controlled that unemployment was until recently unknown. However, misallocation and under-employment are continuing problems; these will be discussed in Chapter 3.
68. As shown in World Bank (1983, p.139-140).
69. Hao (1984) says that the Research Institute of Educational Projects in China had been working on the needs for technical experts by the end of the century. More recently the Ministry of Education, as it then was, set up a Commission for Educational Planning to determine labour and training requirements (Gu, 1984, p.147).
70. Wei (1986) notes that most of the problems with unified admissions and placement in higher education are caused by problems in forecasting personnel requirements. Zhang (1986) describes investigations into using such surveys for admissions planning in 1982-1984, indicating the preliminary nature of such processes.
71. China has 0.5%, compared to Indonesia with 0.7%, Malaysia with 1.8%, Thailand with 2.2%, Republic of Korea with 10.4%.
72. The World Bank's first education project in China was to support the elite universities in increasing science and engineering education for labour needs (Hayhoe, 1989b, Chapter 7). In fact ter Weele was the leader of the Bank's first education sector mission to China in 1980 (ter Weele, 1983, p.493).
73. This was certainly true in the early 1980s. Rosen (1985a, p.371) says China is doing the opposite of most developing countries in expanding higher education at the expense of basic education, aided by the World Bank.
74. Zhou Beilong, 'The question of the scale and speed of education development in China', *Qiushi* (Seeking Truth), No.6, 16 March, 1989, pp.26-29, 36 (*FBIS JPRS-CAR-89-50*, pp.26-30, 22 May 1989); Zhou Beilong & Zhou Chengye, 'China's education in the year 2000', *Jingji Ribao* (Economic

Daily), 9 November, 1985, p.3 (*FBIS JPRS-CPS-86-001*, pp.38-41, 7 January 1986). Interestingly Zhou Beilong's predictions of an additional 33 million specialized personnel by the year 2000 (which is seen as too high by Zhou), is taken as a starting point for Swanson & Zhang (1987) in their calculations of the need to expand higher education. Johnson (1989) also uses international comparisons in establishing the requirements for the expansion of higher education, but quotes a World Bank figure of 12% annual growth, which is at odds with Zhou Beilong.

75. He compares the number of college students enrolled per \$100 million in the GNP for countries such as Japan and the USA, concluding that in 1983 China had more than the USA and three times that of Japan. The figure for China had increased by 50% by the year 1988!
76. *FBIS JPRS-CAR-88-042*, pp.23-6, 1 August 1988.
77. *SWB FE/0987 B2/3*, 4 February 1991.
78. Discussing the neglect of education Liu Yanjing argues that it is necessary to change the idea that economic reform must precede educational reform (*FBIS JPRS-ACR-89-027*, pp.63-4, 29 March 1989. See Rosen (1985a, pp.324-331) for a summary of the arguments of both sides in the early 1980s, which led in his view to a decentralization of education and a neglect of mass education, and Rosen (1984a) for translations of articles by Chinese commentators on the subject..
79. If education is seen as the key to economic growth then maximum growth in education, especially higher education, is required. The need to meet the demands of the economy could then be fulfilled by distance education, especially as this could also cut expenditure by its cost-effective approach. This was recognized by Li Peng when he called for the use of the Radio and Television Universities and correspondence education to cut the cost of educational spending, while trying to meet the needs of the economy (*SWB FE/8125?BII/3-4*, 4 December 1985). Also it is possible that some of the problems of labour planning could be avoided by adults studying through distance learning methods. I will examine in Part 2 whether these hopes for distance education can be realized.
80. See note 46.
81. *ZGJYB*, No.647, 10 January 1989, p.3

CHAPTER 3 CHINESE CONVENTIONAL EDUCATION POLICY AND PRACTICE

INTRODUCTION

The last chapter showed the context of theoretical ideas within which distance learning develops, and in this chapter the policy context will be the focus. Through an examination of conventional education I will show the context within which distance learning operates, the policies that affect it, and the possible roles in the development of higher education that could exist for distance learning. This context will be established through giving an overview of educational policy for primary, secondary and higher education, an outline of higher education reform, and a detailed examination of the expansion of higher education. From this examination will emerge a number of roles for distance learning in terms of both contributing to the expansion of higher education in general and in attempting to answer some of the difficulties and criticisms of the conventional system.

AN OVERVIEW OF EDUCATIONAL POLICY

The period immediately following the end of the Cultural Revolution in 1976 was one of expansion of higher education and an improvement of quality in all sectors of education. The driving force for the changes was that education should serve economic development. The thrust of educational policy and practice since 1978 has therefore been to expand and improve the labour force for this economic development. Although this period has been characterized by "economics in command", there have been times when politics has asserted itself; for example in the wake of the 1986 student demonstrations and even more so following the events of June 1989.¹ In the primary school sector the main goal is to obtain universal primary education, although in a phased way. In 1979-80 it was assumed that it would be achieved in the economically well-developed (coastal) regions by 1985, in medium-developed areas by 1990 and in underdeveloped areas at a later, more flexible, date (Ministry of Education, China, 1981, p.2). However, in the Compulsory Education Law of 1986, enacted to guarantee implementation of basic education for all, the dates for

implementation had slipped to 1990 and 1995.² Even in the Eighth Five-Year Plan, started in 1991, compulsory education was not predicted until the end of the century.³

During the Cultural Revolution secondary education had been expanded as part of the principle of equality emphasised in that period. Numbers enrolled in both general junior and senior secondary schools (*putong chuzhongxue*, *gaodeng zhongxue*) declined dramatically after the Cultural Revolution, reflecting the emphasis on quality (rather than equality) for economic development, and in reaction to the poor quality of these schools during the Cultural Revolution.⁴ With this decline has come a deterioration in the chances of getting into higher education, and considerable competition generated in the education system at lower levels.⁵ The decline in general secondary education has been accompanied by a development in vocational and technical middle school education (*zhongdeng zhiye jishu jiaoyu*). A call for such a development was made by Deng Xiaoping at the 1978 national conference on education (Deng, 1984, p.124).⁶ This growth is motivated by a belief that vocational education will make young people more employable, improve productivity and hence the economy.⁷ More to the point perhaps is the need to provide a meaningful and useful education for the many secondary school graduates who cannot progress up the education system. The goal was to have 50% of all secondary school students in vocational and technical education by 1990.⁸ However, in 1990 it was still the same planned figure for the Eighth Five-Year Plan.⁹ Progress towards this figure has been spectacular as Table 3.1 shows, and the target now looks achievable.

Table 3.1: percentage of students in vocational and technical education

Year	1980	1985	1986	1987	1988	1989	1990
%	18.8	36	37.5	40	42.0	42.7	45.7

Sources: 1980 & 1985 Gao & Xiong (1988, p.56); 1986 Zou, (1988, p.238); 1987 SWB FE/0191 B2/2-3, 30 June 1988; 1988 ZGJYB, No.643, 31 December 1988, p.1-2; 1989 SWB FE/0401/C1/4-6, ; 1990 SWB FE/1005 C1/2, 25 February 1991.¹⁰

Both the primary and secondary sectors suffer from student drop-out and problems with the quality of teachers. Recent national figures, given after a State Education Commission inspection, show that 3.2% of primary school students and 7.3% of junior secondary

school students dropped out in 1989, indicating a slight drop for primary but an increase for secondary since 1988.¹¹ Drop-out is a product of economic policies that encourage children to become employed (rather than attend school), the dispiriting effects of failure in the highly competitive school system, the excessive fees charged by schools and the general poor quality of teaching.¹² The problem of improving the quality of such a large teaching force offers opportunities for the use of distance learning, and I will deal with this in more detail in the next section.

Although the expansion of higher education started immediately after the Cultural Revolution, it was given added impetus in 1983, with ambitious targets being set. This was accompanied by reform of the system to re-establish academic standards, re-organize the degree specialities offered, and increase the autonomy of the higher education institutions. However, by the end of the 1980s the government had moved to halt further expansion in response to the difficulties in finding suitable jobs for graduates, worries about the quality of graduates, and difficulties of providing adequate funding for the system. This change of emphasis away from higher education also reflected a renewed interest on the part of the government in primary education, particularly in rural areas.¹³

The decrease in the emphasis on higher education occurred at a time when dissatisfaction with education, and of those within education, was at a peak such that a "crisis in education" was being discussed. This crisis was instrumental in precipitating the events that led up to the demonstrations in 1989 and the tragic Tiananmen Square incident.

PRIMARY AND SECONDARY SCHOOL TEACHER SUPPLY AND QUALITY

Shortages of teachers seem to exist mainly at secondary level, including general and technical and vocational education (Lewin & Xu, 1989, p.14; Lo, 1984, p.175). These shortages are in addition to the severe lack of qualified teachers, something which affects both primary and secondary schools.¹⁴ The situation on shortages of teachers in rural areas is again worse, because teachers are reluctant to go to villages (Hawkins, 1983b). The shortages are exacerbated by the under-utilization of teachers, though there is much to do besides teach which apparently makes it difficult to increase contact time (Cheng,

1986, p.259; Lewin & Xu, 1989, p.14-5). More worrying for the long term is the increasing unattractiveness of teaching for young people in colleges and universities, even for those who are in training to be teachers (Cheng, 1986, p.259).¹⁵ The latter situation results in teachers not taking up posts that they are assigned to, and being lured away from teaching.¹⁶ This situation reflects worries about the low status and poor salaries and housing of teachers.¹⁷ Salaries have been increasing, though slowly (Cheng, 1986, p.259), and in 1988 a teacher's salary was still below the average industrial wage in the state sector.¹⁸ On top of all this the lack of job mobility of teachers (not unique to them) leads to low morale (Lewin & Xu, 1989, p.15).

Where supply of teachers may be sufficient, for example in primary schools, the quality is likely to be unsatisfactory. Figures for the number who are unqualified are usually reported in percentage terms, and, although those for 1990 in general show an improvement over those for 1988, there is still a large number to be trained (see Table 3.2 overleaf). Crucial to defining 'unqualified' is some standard qualification and the State Education Commission now requires teachers to sit for a professional certificate if they do not have a teaching diploma from a college or university.¹⁹ Using this definition of 'unqualified', and the figures for 1990 given in Table 3.2, 1.42 million junior secondary, 0.28 million senior secondary, and 1.45 million primary school teachers were unqualified in 1990. The targets for 1995 are to reduce the unqualified in primary schools to 20%, and in secondary schools to 50%, giving figures of around 0.45 million and 0.22 million, respectively, to be trained in the period 1990-95.²⁰ In addition there are some two million primary and secondary school principals who need training.²¹ These large figures are an ideal situation for the use of distance learning methods.

Table 3.2: percentage of unqualified teachers in primary, junior secondary and senior secondary schools (1977-90) and total number of teachers in 1990

<i>Sector</i>	<i>1977</i>	<i>1978</i>	<i>1988</i>	<i>1990</i>	<i>Total Number of teachers (1990)</i>
Primary	53	52.9	31.8	29	5,000,000
Secondary	90	81.8	63.3	59	2,900,000
(Junior Sec.				59	2,400,000
Senior Sec.)				57	500,000

Sources: 1977 & 1990 Mr Wang Yuanlin, Director, Teacher Training Department, State Education Commission (interview 19 May 1990); 1978 & 1988 ZGJYB, No.756, 29 September 1989, p.3.

Minority education

It is not my intention to do more than indicate that a problem exists for minority education. Its significance for distance learning is obvious, given the potential for overcoming geographical problems.

Although great strides have been reported by the government in minority education, with increased enrolments for all sectors of education since 1978 (higher education up 24.8%, secondary education 42.2%, and primary 27.9%),²² the NPC Standing Committee discussions in 1988 revealed this area of concern in education.²³ Kwong & Xiao (1989) in reviewing China's efforts conclude that equality for minorities has not been achieved, particularly for primary education. Once into the education system, however, minority students have a better chance of getting into higher education. Lewin & Xu (1989, p.10) see the relative neglect of minorities as an inevitable consequence of the phasing of compulsory education. The delay until the end of the century in implementing the law in backward areas, which usually have large minority populations, will disadvantage these groups. This is also likely to extend to the provision for improving their teachers. The stress in the Eighth Five-Year Plan is, however, on primary education for minority groups.

HIGHER EDUCATION

Introduction

In this section I will be concerned with ‘regular higher education’ (*putong gaodeng jiaoyu*).²⁴ The early policy of expansion outlined at the beginning of the chapter was also the encouragement to distance learning to expand. It was seen as a way of overcoming the limitations of the conventional system in meeting the needs of the economy and the demands for higher education from young people. The change in heart of the government that subsequently led to a halt in expansion could in part be attributed to a change in its view of the relationship between education and the economy, explored in Chapter 2. However, it could also be attributed to the difficulties that were occurring in the higher education system, including the difficulties of job assignment, the quality of graduates and of the rising costs of education. Within this climate distance learning could be looked upon as a way of expanding higher education that might overcome these difficulties.²⁵

This section will therefore examine:

- 1 the expansion of higher education, and how it met the needs of the economy and the demand for education;
- 2 the quality of higher education, and the criticisms of it;
- 3 the crisis in education, that formed a backdrop for a national concern about education spending and the reaction to the events of June 1989 in *Tiananmen*.

Recent and general accounts of the whole context of higher education are given by Hayhoe (1989b), and Henze (1984a), but perhaps the most authoritative and complete account is by Zhou (1989), a State Education Commission official with access to people and data not normally available to western scholars. Zhou considered the four major elements of reform: planned expansion and diversification; transformation of admissions and graduate placement; restructuring of academic programmes by level and fields of study; change in external administration and university governance. I will start with an overview of the reforms, before going on to the substantive issues of expansion, quality and the crisis in education.

Reform of higher education

The reforms of the post-Mao era, accompanying the drive to expand and improve the quality of higher education, include:

- a. the re-introduction of key-point universities (parallel to those in primary and secondary education);
- b. the establishment of post-graduate education;²⁶
- c. the re-instatement of the award of academic degrees;²⁷
- d. the re-introduction of an examination for entry to higher education;²⁸
- e. increased autonomy given to higher education institutions (including increased control over admissions, employment of staff, use of capital funds, assignment of graduates, and the curriculum);²⁹
- f. the re-organization and reduction of narrow subject specialities and the inclusion of those needed for modernization.

In the period immediately after the fall of the 'Gang of Four' the concern was with: the admission system (in particular the entrance examination); the graduate job assignment process; the re-adjustment of the subject specialisms; and to a lesser extent the improvements of teaching methods.³⁰ Since 1983 the issue of the autonomy of universities became an important element of statements,³¹ and in 1985 the 'Decision' of the CCP Central Committee (27 May, 1985) reinforced these statements.³² The most recent statements on reform contain the same concerns.³³

In an effort to expand higher education a return to the policy of 'walking on two legs' (from the early 1960s) was advocated.³⁴ This led to a range of new institutions, and to the development of adult higher education. One of the consequences of this was to give local governments more responsibility for training their own high-level personnel, through support for local higher education (Lin, W. 1985, p.1). Rosen (1985a) saw this as the decentralization of mass education, with the State Education Commission keeping a tight control over the elite universities, and giving more autonomy to local education authorities who serve the mass of the people.

Expansion of higher education

Introduction

This expansion was premised on the need to modernize and in particular to improve science and technology (Suttmeier, 1980, Chapter 2). Chapter 2 has already indicated the difficulties associated with labour force planning as an element of human capital theory. But the needs of the economy for high-level personnel is only one motivation for the expansion of higher education; the demand from secondary school graduates, and others, is another. First I will deal with the plans that were made for expansion and how the conventional system responded in quantitative terms. This provides some of the information to examine how higher education responded to the needs of the economy, and the extent it satisfied the demand from school leavers.

The plans and achievements of expanding higher education

Here I want to look at the quantitative expansion of higher education, at how plans have been fulfilled and how the calls for expansion have moderated in the course of the 1980s. Table 3.3 (overleaf) shows the number of institutions, student admissions, enrolments and the number of graduates since 1976. The figures show the expansion continuing until 1989, when, in the wake of the events in Tiananmen Square, there was a reduction, one that was continued for reasons other than political ones, as I will show later. The planned intake for 1991 of 619,658 students indicates a continuing policy of a moratorium on expansion,³⁵ a policy that is to be continued during the Eighth Five-Year Plan.³⁶

The evidence from the two earlier five-year plans shows how the government had reduced the projected expansion over the ten-year period, despite an ambitious expansion plan in 1983. The Sixth (1981-1985) and Seventh (1986-1990) Five-Year Plans for social and economic development give the targets for regular higher education and these are shown in Table 3.4 (overleaf) and Table 3.5 (p.41).³⁷ Figures for admissions and enrolment are for the years in question (e.g. 1980 & 1985) and those for graduates are cumulative over the five-year period.

Table 3.3: conventional higher education statistics for institutions and students
(thousands) 1976-90

<i>Year</i>	<i>Institutions</i>	<i>Admissions</i>	<i>Enrolment</i>	<i>Graduates</i>
1976	392	217	565	149
1977	404	273	625	194
1978	598	402	856	165
1979	633	275	1020	85
1980	675	281	1144	147
1981	704	279	1279	140
1982	715	315	1154	457
1983	805	391	1207	335
1984	902	475	1396	287
1985	1016	619	1703	316
1986	1054	572	1880	393
1987	1063	617	1959	532
1988	1075	670	2066	553
1989	n.a.	597	2082	619
1990	1075	610	2063	614

Sources: 1976-1979 *Zhongguo jiaoyu nianjian bianjibu* (1984, pp.965-971); 1980-1985 Department of Planning, SEC (1986, p.20); 1986 Zhou (1989, p.85) & *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.364); 1987-88 Zhou (1989, p.85); 1989 admissions SWB FE/0708 C2/5, 9 March 1990, enrolment ZGJYB, No.991, 19 March 1991, graduates ZGJYB, No.752, 19 September 1989; 1990 ZGJYB, No.991, 19 March 1991.

Table 3.4: Sixth Five-Year Plan (1981-85) targets for higher education (thousands)

	<i>1980</i>	<i>1985</i>	<i>Growth</i>		<i>Annual growth</i>	
			<i>(No.)</i>	<i>(%)</i>	<i>(No.)</i>	<i>(%)</i>
Admissions	280	400		43%		8.6%
Enrolment	1,144	1,300		14%		3.2%
Graduates			1,500		300	

(1981-5)

Source: The Sixth Five-year Plan of the PRC for Economic and Social Development (1981-1985) in Hu & Seifman (1987, pp.130).

Table 3.5: Seventh Five-Year Plan (1986-90) targets for higher education (thousands)

	1985	1990	<i>Growth</i>		<i>Annual growth</i>	
			(No.)	(%)	(No.)	(%)
Admissions	619	750		21%		4%
Graduates			2,600		520	

Source: Seventh Five-Year Plan of the PRC for Social and Economic Development; SWB FE/8235/C1/23, 17 April 1986.

These tables reveal the obvious difference in planned growth in the two periods, with 1986-1990 having a growth in admissions half that of the previous five years. The increased size of the system allows of course a higher output of graduates in the second period. During the first period the Ministry of Education and the State Planning Commission through the State Council promulgated a report on speeding up the development of higher education in the period 1983-1987. Table 3.6 gives the target figures.

Table 3.6: 1983 State Council plans for higher education

<i>Year</i>	1982	1987	<i>Growth</i>	<i>Annual growth</i>
Admissions	315	550	75%	15.0%
Enrolment	1,153	1,760	53%	10.6%

Source: *State Council Bulletin*, No.11, 30 June 1983, p.492.

These plans show an altogether more ambitious growth rate for higher education than either of the five-year plans. Table 3.7 (overleaf) compares the success of the three different plans against the actual figures for admissions, enrolments and the cumulative figures for graduates.

Table 3.7: comparisons of conventional higher education plans and actual achievements (thousands) 1983-1990

Year	Admissions		Enrolment		Graduates	
	Plan	Actual	Plan	Actual	Plan	Actual
1985	400	619	1300	1703	1500	1530
1987	550	572	1760	1959	1800	1780
1990	750	614	-38	2063	2600	2668 ³⁹

Sources: Tables 3.3-3.6

This table shows that the predictions on the number of graduates were quite good, but those for the admissions and enrolment are exceeded except for the 1990 admissions. This latter shortfall reflects the change in policy that occurred in the last two years of the five-year period. Taken together these tables show how plans and achievement became less ambitious in terms of expansion over the years. By 1989 worries were being expressed about the size of the higher education system. These worries were expressed even before the events of June 1989, with a State Education Commission official, Zhou Beilong, calling for a cut in expansion in an article in *Qishi (Seeking Truth)* in March of that year.⁴⁰ The 1989 goals and plans for the State Education Commission included a halt to the increase of, or even a reduction in, admissions.⁴¹ This view was reiterated by Li Peng in late 1989 and carried through into the Eighth Five-Year Plan (1991-1995).⁴² The 1990 admissions show the effects of this policy when compared to the planned figure of the Seventh Five-Year Plan.

The needs of the economy

Chapter 2 considered the different ways that the needs of the economy could be estimated, and here I want to look at some of the quantitative results of these estimates. These estimates relate both to global figures about the number of graduates needed, the numbers at different levels of higher education and the kinds of specialisms of graduates.

Zhou Beilong's critique of China's rationale for expansion, based on international comparisons (Chapter 2, p.23), did not relate it to the specific *needs* of the economy

(based upon labour surveys for example), but only to the general *economic level*.

Unfortunately he did not quantify any of his results, so his critique can only be used to argue for a general hold on expansion, one that has become government policy. The early part of the decade, covering the Sixth Five-Year Plan, was one where government views of satisfying the needs of the economy reflected an optimistic view of higher education in terms of its investment value to the economy. When this was coupled with methods of estimating needs, expansion became the order of the day. I have already shown that the expansion that resulted was reversed in the latter half of the decade.

For economic development there are reports of there being too few graduates for the country's needs. The State Education Commission said that 700,000 graduates were needed as against the 393,000 that were produced in 1986.⁴³ But also there are too many being produced for the capacity of higher education, and hence threatening the quality.⁴⁴ There are also problems in assigning graduates to jobs that require a consideration of the different types of graduates, and their willingness to go to where they are needed in the economy. (I will come back to the job assignment process when I consider issues of quality.)

Johnson (1989, p.3) and Suttmeier (1980, Chapter 3) both give estimates which show that the education system is well short of needs based upon growth of the economy. Johnson, working on World Bank comparisons of China with other developing countries, gives an annual expansion rate of 12% from the 1980s to the end of the century. Suttmeier, on the other hand, bases his on Chinese estimates of both the existing labour pool (through surveys) and growth rates in the economy, and gives an estimate of more than a 2.5-fold increase in graduate output over the ten-year period of 1976-1985. Neither of these comes anywhere near the plans (apart from the exceptional 1983 one), nor the actual performance of the conventional higher education system as indicated in Tables 3.4-3.7.⁴⁵ Whatever are the 'true' needs of the economy the government has now controlled the growth in higher education in part because of the fact that the type of graduates coming out are not suitable (in both professional and political terms), and in part because of the costs of higher education. The latter relates both to the general problem it has in raising

educational expenditure as well as its change of heart on value of higher education as an investment.

The other element in the requirements for graduates is to consider the level of higher education that they have obtained. Degree studies (*benke*) represent the four or five-year courses that professional scientists and engineers would usually undertake. Diplomas (*zhuanke*), requiring two or three years of study, are for mid-level technicians. Few of the commentators on the labour needs of the economy make a direct correspondence either with the level of qualification required or with the level of the jobs. Thus the World Bank (1983, p.143) gives the requirements for mid-level technicians and for scientists and engineers, giving the respective outputs of the education system, but does not say what level of higher education they in fact require. Assuming the correspondence of degrees for engineers and diplomas for technicians, then the World Bank estimates requirements for the ratio of diploma:degree would be 2:1, whereas higher education is producing them in the ratio 1:1, and that only in 1990 (see Table 3.8). Zhou (1989, pp.132-3) considers a number of claims for the ratio as it exists and what it should be. The *existing* ratios for graduate output he gives are: 1:2 (1979) and 1:5 (1981). The *ideal* ratios (of diploma:degree graduates) he gives are: 1:1, 1.5:1, 3:1, and 2:1. Unfortunately what currently exists in the economy is not so clear, rather the focus has been on the balance of graduate output. What is obvious, however, is the need for a dramatic shift in the balance of output in favour of diplomas, equal to that over the 1980s, to serve the mid-level technicians, a shift recognized by the government.⁴⁶

Table 3.8 shows the proportion of diplomas as it affects graduate output, unfortunately only for the period 1981-1985, and 1988. This indicates that after the period of consolidation following the Cultural Revolution, and the emphasis on higher-level qualifications, the balance was shifted to emphasize diplomas. It is likely that this trend has continued given the needs identified earlier, and the government's policy on vocational education in general. However, there is still a way to go before the ratio in conventional higher education is reversed in favour of diplomas compared to the maximum given above as the requirements of the economy.

Table 3.8: ratio of degree and diploma graduates (thousands) and percentage of diploma graduates from conventional higher education

<i>Year</i>	1981	1982	1983	1984	1985	1988
<i>Degree</i>	0	368	253	204	202	280
<i>Diploma</i>						
<i>No.</i>	139	89	83	83	114	274
<i>%</i>	100	19	33	29	36	49 ⁴⁷
<i>Total No.</i>	140	457	335	287	316	553

Sources: 1981-1985 Department of Planning, State Education Commission, 1986, pp.27-8; 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi*, (1989, p.28). (Figures have been rounded up hence totals may not match.)

In considering the reform of higher education I noted that the subject specialisms were being revised. Along with this came the expansion of subject areas, particularly in the humanities and the social sciences, which had been neglected in the Cultural Revolution period. Hayhoe (1984b, 1988, 1989a, 1989b) has analysed this change of emphasis from the point of view of how knowledge structures reflect the needs of modernization, both political and economic. Zhou (1989, pp.143-158) has analysed the historical evolution, problems, reform efforts and predications for needs for different specialities. Estimates of the needs for particular specialisms are not usually part of the calculations made for total graduate needs. In any case they are likely to be more suspect than more global figures as errors in labour surveys or growth in certain parts of the economy are likely to be more variable.

Zhou (1989, pp.143-158) has analysed the output of conventional higher education and compared it with the predictions of the needs in the year 2000. Using student enrolments his predictions show that students of management, law, finance and economics, and social sciences need to increase by one or two orders of magnitude.⁴⁸ On the other hand those with engineering and medicine need to halve their numbers.⁴⁹ The proportions enrolled in the various specialisms are much the same in 1988 as in Zhou's latest year of 1986, and they were reaching a plateau even then. Thus it seems unlikely that conventional higher education will be able to make the order of magnitude corrections required. Of course

adult education may be able to correct this imbalance, but Zhou did not consider this sector (having already discounted its contribution to the development of diploma graduates). Such a consideration (see the next chapter) is complicated by distinguishing between graduates with degrees and diplomas in the various specialisms. Again Zhou ignored this and 1988 data show that there are differences in proportions between the two types of qualification within conventional education. In most cases this difference implies a greater increase in diploma graduates which as I will show in Chapter 4 favours adult higher education.⁵⁰

Demand for higher education

Demand from school leavers and adults is the second motivation for the expansion of higher education, and I will first consider the extent of the problem in quantitative terms. Table 3.9 (overleaf) shows the number of candidates for the higher education entrance examination (*a*), the number of graduates from general senior secondary schools (*b*), the number of admissions to higher education (showing the number who start a 4-year degree (*benke*) course) (*c*), and the total (*d*) - the remaining do the diploma (*zhuanke*), a 2 or 3-year professional course), along with the resulting admission ratios for senior secondary school graduates and entrance examination candidates.⁵¹

Despite the uncertainties of the statistics the figures show periods of improvement in the percentage of secondary school graduates getting into higher education (*d/b*: 1983-5 & 1987-9). That improvement has been accompanied by an increase in the secondary school graduates from 1984 to 1988 after the fall in 1984, but the position at the beginning of the 1990s looks no better than that of 1984. More important the numbers wanting to enter, and hence taking the examination continues to rise, but the chances of getting in have declined throughout the second half of the 1980s. But now they have begun to rise.⁵² Thus a rejection of three-quarters of the hopeful students indicates a large unsatisfied demand, even when taking into account that about half of the successful ones go to what they probably regard as a second class alternative (*zhuanke* courses). When put alongside the fact that only about 3% of the age group actually go to university then the potential demand looks staggering.⁵³

Table 3.9: higher education admission figures (thousands) and ratios for 1983-1991

Year	No.sit	Sec.	HE admissions		Admission Ratios		
	exam	grads.	benke	total	(%)	(%)	(%)
	a	b	c	d	c/b	d/b	d/a
1983	n.a.	2351	256	391	10.9	16.6	n.a.
1984	1650	1898	284	475	15.0	25.0	28.8
1985	1760	1966	318	619	16.1 ⁵⁴	31.5	35.2
1986	1910 ⁵⁵	n.a. ⁵⁶	n.a.	572	n.a.	n.a.	29.9
1987	2270 ⁵⁷	n.a.	420 ⁵⁸	617	17.0 ⁵⁹	25.5 ⁶⁰	27.2
1988	n.a.	2480	341	670	13.7	27.0 ⁶¹	n.a.
1989	2660	n.a.	n.a.	597	n.a.	28.2 ⁶²	22.4
1990	2810	2330	n.a.	609	n.a.	26.1	21.7
1991	2900	n.a.	n.a.	619	n.a.	n.a.	21.3

Sources: 1983-1985 higher education admissions and secondary school leavers data, Department of Planning, SEC (1986, pp.6 & 30). Examination candidate data for 1984 & 1985 *SWB FE/8001/BII/13*, 12 July, 1985. Other data: 1986 *FBIS JPRS-CPS-86-066*, p.60, 28 August, 1986, *ZGJYB*, No. 461, 27 October, 1987, p.3; 1987 *ZGJYB*, No.413, 7 July 1987, p.1, *FBIS JPRS-CAR-88-055*, p.12-16, 16 September 1988, *The China Quarterly*, No.114 June 1988, p.336, *SWB FE/0098 B2/5*, 12 March 1988; 1988 *SWB FE/0098 B2/5*, 12 March 1988, *ZGJYB*, No.643, 31 December 1989, pp.1-2; 1989 *SWB FE/0503 B2/20*, 8 July 1989, *SWB FE/0708 C2/5*, 9 March 1990; 1990 *ZGJYB*, No.991, 19 March 1991, p.2; 1991 *ZGJYB*, No.983, 5 March 1991, p.2.

Note: admission ratios in most cases are based upon the original statistics, and hence ratios calculated from the data in the table may not match those given because of rounding errors.)

The qualitative aspects of this demand result in the competition at school level I have already noted. This is especially so in general senior secondary schools, and this continues to be a problem.⁶³ Writing in 1988 an official from the State Education Commission discussed the effect of the competition on schools and students, and the fact that those who do not get in are difficult to employ. Those in rural areas want to leave the village by going on to some form of higher education. Calls for vocational education are as much a concern to reduce the pressure of the demand for higher education as they are a concern for economic development.⁶⁴

Table 3.9 also reflects the other important feature of the development of conventional higher education, namely the changes in proportion of diploma courses. The changes in

Table 3.9 are not directly comparable to those in Table 3.8 because of the delay in admissions affecting enrolments, but they both show a slight decline in diploma courses in the 1980s, a decline that was reversed.

The fact is then that the conventional system is not meeting the demand for higher education. As will be shown later the expansion of higher education by developing adult higher education, especially distance learning, has been an important goal of the government. This goes some way to satisfying the demand, and at the same time adding to the provision of graduates with diplomas. The hope is that this will satisfy both the *economic needs* and the *demand* for higher education, and will stem the tide of problems that the unsatisfied demand creates.⁶⁵ This is not only in quantitative terms, but in qualitative terms. The next section will examine the failings in quality of conventional higher education, that again distance learning may be able to avoid, at the same time as making up for the quantitative shortcomings of the conventional system.

The quality of higher education

In dealing with the reform of higher education I have already pointed out that the revision of subject specialisms and improvements in teaching methods were elements of these reforms. Moreover I noted that the recent reform agenda is much the same as the early one (see note 33), indicating that the faults in the conventional system, to which the reforms were directed, remain. In outlining the 1985 CCP Central Committee Decision on reform to a national education conference, Wan Li spoke of the problems with teaching methods: 'force-feeding', poor teaching material and the lack of creativity and initiative among students.⁶⁶ There were significant numbers of institutions which were below standard⁶⁷ and a general concern about the curricula and teaching. So whatever the quantity of higher education that expansion has achieved, if it is at the expense of quality it will not have achieved what the post-Cultural Revolution era has intended.

Here I will examine the quality of education in terms of the concerns about the curricula and the teaching and learning methods that together lead to graduates who do not always

fit the needs of the jobs to which they are assigned. Zhou (1989, pp. 86-91) considers the problems of expansion, some of which relate to the quality, and which led the State Education Commission to cut back on this expansion. In particular he argues that expenditure did not rise in line with student numbers, and staff numbers and their quality were inadequate. My examination of quality will draw upon official statements and some Chinese academic commentaries, but most significant are four surveys that have been carried out in recent years. Three of these surveys were of students in Shanghai: one was of 4,000 students, another of 8,959 in 12 institutions, and the third of Fudan students.⁶⁸ The fourth was of the 1985 graduates of seventeen polytechnics (vocational colleges) and their employers.⁶⁹ The aspects of curricula, and teaching and learning that I will consider are: curricula speciality reforms, application of theory, curriculum flexibility, teaching and learning methods, teaching media, and examinations. I will then go on to consider the problems of graduate job assignments that are to some extent an indicator of the failings in output quality of the higher education system.

Curricula

Problems about the curricula relate to the reform of specialisms, the lack of sufficient practical application of knowledge, and the inflexibility of the curriculum structure. I have already mentioned the revisions in specialisms, called for by modernization, which still reflected the narrowness of the Russian legacy of the 1950s.⁷⁰ Hayhoe (1988) gives details of how the departments of higher education within the State Education Commission are revising the syllabuses. She has also argued that moves to broaden the curriculum and introduce more applied specialisms, without the earlier narrowness, are evidence of a more appropriate model (Hayhoe, 1984b & 1989b).⁷¹ Another important development has been the importance of interdisciplinary and multidisciplinary studies and research, though such activities may be confined to the elite universities such as Fudan in Shanghai.⁷² There is no doubt too that students want a broad curriculum if the results of surveys can be relied upon.⁷³ Yet, despite these apparently welcome and necessary changes, Li Tieying and He Dongchang, the senior ministers of the State Education Commission were, in 1989, still saying that the structure of disciplines in universities and colleges is 'irrational'.⁷⁴ Evidence of problems with graduates being

assigned to jobs, which I will deal with later, also bears out problems with the nature of specialisms.

Application of theory

Along with the revision of curriculum structures was the need to ensure that within courses the theory being learnt was applied (Hayhoe, 1989b, p.27-8), and, to use the old phrase, 'theory and practice should be integrated'. As was noted in Chapter 2, this was to correct the lack of theory during the Cultural Revolution. It may be, however, that the reassertion of the role of theory in 1977-78 (Pepper, 1978, p.874-5) has swung the pendulum too much the other way. Although no doubt progress has been made in improving the application of knowledge, there are still complaints from students and employers about the lack of such application in courses.⁷⁵ There seems to be a worry that insufficient links are made with industry and enterprises,⁷⁶ and that university teachers need to find out what industry needs.⁷⁷ Such links were seen in schemes of part-work, part-study which have become less fashionable, though as I argued in Chapter 2 the objectives of combining education and work relate much more to students' subject learning than to political and ideological attitudes.⁷⁸ The social practice activities discussed in Chapter 2 fulfil the function of relating theory and practice, but there is increasing evidence that the political objectives of such activities are becoming more important. I will return to this when discussing the crisis in education at the end of the chapter. All of such ideas on application of knowledge have obvious references to teaching and learning methods which I will deal with shortly.

Curriculum flexibility

The 1985 CCP Central Committee Decision reinforced the idea of electives (Lin, 1985, p.28), but in early 1986 Tianjin University was only trialling a credit system, to allow good students to graduate early, broaden the curriculum outside students' specialisms, and give a better match to students' abilities.⁷⁹ Credit systems, which would allow students more choice through electives, were argued for in the early 1980s; Pepper (1982, p.199-200) was sceptical, noting that there were no options for students. Again therefore we

have the problem of the time it takes for reforms to get put into practice, let alone to become widespread.

Teaching and learning methods

Similarly, as Lin, W. (1985, p.28) says, reform of teaching and learning methods are much talked of but are the most difficult aspect of the 1985 reforms to implement. Not only is there the legacy of traditional Chinese methods, but also the carry-over of the methods engendered by competition at secondary school (Jiang Shanyi, 1988, p.33); these result in much memorization (Bastid, 1984, p.207). The poor teaching is seen as boring, with spoon-feeding and force-feeding, using dictated notes which are to be learnt parrot-fashion.⁸⁰ Lecturers, who just repeat what is in the books, need skills to make lectures more interesting. Students would like more time for independent study with teaching materials distributed and reference books available to consult.⁸¹ None of the ideas advocated by Mao more than 50 years ago (see Chapter 2) have evidently taken root. Pepper (1978, p.876) said that it was difficult to find out if memorization had stopped, but the results of the surveys, and the fact that in 1989 one author saw the same poor teaching methods that I have described as one of the indicators of the "third crisis in education", lead me to believe that little has changed.⁸² Added to the poor methods are outdated textbooks (Lewin & Xu, 1989, p.10) and teaching materials, especially in such areas as computing.⁸³

Obviously such failings in teaching and learning are a reflection of the quality of the teaching staff. To some extent some of this must be the result of the poorly trained staff taken on in the Cultural Revolution, although as Herschede (1979, p.69-70) argues a problem has existed since the 1950s. Rosemont (1985, p.45) talks of the problem of the lack of intellectual vigour in the middle-aged lecturers. We hear much of the training of primary and middle school teachers, but less of those in higher education.⁸⁴ The increasing entrepreneurial climate in higher education institutions also affects the quality of teaching, firstly in terms of the general attitudes that prevail (Orleans, 1989) and secondly because the more senior staff are engaged in money-making consultancies and research leaving very inexperienced lecturers doing the teaching (Kwong, 1987, p.252).

This is compounded by the general growth in staff that has led to large numbers of inexperienced staff being recruited, few of whom have post-graduate qualifications.⁸⁵

Creativity, independent thinking and problem solving

The desire for more time for self-study time on the part of students is not only seen as a means of learning, but also as an end in itself, to use my distinction from Chapter 2 (p.4). It is seen as part of the development of creativity, independent thinking and problem solving. As noted earlier calls for this came from Wan Li in 1985, although as Hayhoe (1989b, Chapter 2) argues there seems to be some ambivalence in his view; students' independent thinking should not extend to political ideas. There have been numerous reports of the importance of this kind of approach to learning, including student surveys, but little by way of details as to what it means or how it is achieved in the teaching.⁸⁶

Teaching media

Ushering in the new era at the 1978 national education conference both Deng Xiaoping (1984, p.124), and his education minister Liu Xiyao (1979, p.27) mentioned the use of media in teaching. This was partly in the context of distance learning, but also for conventional teaching. There are a number of conferences and indeed a journal *Dianhua Jiaoyu* (Audio-visual Education). There is limited evidence of the extent of the use of such media as video, and there have been reports of the impact of the lack of funds on the maintenance of educational equipment (including televisions) and the supply of materials.⁸⁷

Examinations

Finally examinations within higher education institutions appear to be another manifestation of poor teaching. They encourage memorization, by failing to test higher level abilities, there are too many and they do not include a range of types (e.g. orals, discussions and practical tests). What is significant is that this specific critique comes from students not educators!⁸⁸

Graduate job assignment

If higher education is producing the graduates that are required by the economy, then the assignment and employment of graduates is an indication of the quality of the system. Its success can be looked at in global terms of supplying the quantity of the right kind of skilled labour required by the economy, as well as at the more particular level of the quality of the graduates themselves. I have already commented on the global supply and so here I want to examine the match of supply and demand in a little more detail, to show another problem of the conventional system. This is most often discussed under headlines or slogans containing the phrase 'supply and demand meet' (*gong xu jianmian*).⁸⁹ The problem is of course that they don't! Even when there has been an overall shortfall of graduates, accompanying this is the paradoxical situation of, in some instances, there being too many graduates.⁹⁰

There are several reasons for the mismatch of supply and demand some of which relate to the job allocation system itself.⁹¹ First, the planning process has in the past not linked admissions to higher education and the job assignment of graduates (Taylor, 1981; Pepper, 1984, pp.7-10; Zhou, 1989, p.103). Admission numbers were treated globally for a college (i.e. they were not broken down by speciality),⁹² and were related more to the capacity of the college than to the needs of graduates with a particular speciality.⁹³ This problem exists independently of the issue of how demand is established (an issue I discussed earlier), and results in cases of graduates of certain specialities being unable to find work.⁹⁴

The second reason for the mis-match of supply and demand is one which has existed for some time, namely the narrowness of the specialities. This is a legacy of the Soviet influence on higher education and it makes it very difficult to place a graduate in a way that uses his or her specialized training (Orleans, 1987, p.195). Although it is hardly surprising that narrowly trained graduates would be 'mis-allocated', it does not explain why, for example, an electrical engineer would find herself working in finance.⁹⁵ Mis-allocation, the third reason for supply not meeting demand, has given rise to much talk of the reform of the job assignment process.⁹⁶ Such reforms try to tackle the problem of

matching the assignment plans of the State Education Commission (or the province) with the skills and preferences of students and the needs of employing units.

The fourth reason for mis-match is more directly related to how the particular graduates match the needs of particular units. They may not be mis-allocated nor have the incorrect specialism, but they may not be practical enough, or take too long to orientate to work in a factory, for example. Worse still, their whole attitude may be one of getting a desk job rather than dealing with production problems.⁹⁷

The fifth and final reason for mis-match also stems from the attitudes of graduates, namely that the majority are unwilling to go to work in rural areas, grass-root (*jiceng*) enterprises, or the remote and border areas. The failure to get sufficient to 'volunteer' to go can be seen in the calls for graduates to go to these areas over recent years.⁹⁸ Urban students, who have the best chance of getting into higher education, are reluctant to move away from city life, and this is probably in part responsible for the problem of unemployed graduates in Shanghai, for example (Rosen, 1985b, p.4; see also note 95).⁹⁹ A variety of devices have been employed including 'directional recruitment' (*dingxiang zhaosheng*) and material incentives, with the intention of encouraging the flow of graduates to areas of need.¹⁰⁰ Despite the use of these incentives, and even when reporting success, there are indications of failings in ideological education and hence a worry about the ideological and political 'quality' of graduates, a point I will return to when I consider the 'crisis in education'.¹⁰¹

The above reasons for the lack of match of supply and demand only give a qualitative indication of quality. What is the extent of the problem in terms of the numbers who are, for example, mis-allocated? It is not easy to judge because official reports on supply and demand problems are not usually accompanied by any statistical data to show just how widespread the problems are. The following are some of these reports:

- a In 1983 a discussion of higher education reform estimated that in 50% of the specialities supply and demand were matched, and in the other 50% supply was greater than demand.¹⁰²
- b Figures for the mis-allocation of graduates are extremely large, with the State Science and Technology Commission giving the following data: 15% of 34,000 technicians used to full capacity, 45% only using three-quarters of their potential, 30% using half their potential, and 10% only using a small part of their capacity.

The Commission estimates that this wastage is equivalent to 3.44 million person-years, more than the total number of college graduates and technical secondary school graduates in the last three years.¹⁰³

- c 13.3% of 1981 and 1982 graduates (in 21 provinces) were mis-allocated in jobs unrelated to their specialities, and a further 20-30% were underemployed (Zhou, 1989, p.123).
- d The unemployment among Shanghai graduates mentioned earlier was put at 50% in 1989. This is likely to be a very local problem because other recent figures, even for Beijing, put the number unemployed at under 2%.¹⁰⁴
- e Smith (1988b, p.26) says 5,000 graduates out of 360,000 were rejected by units, which is 1.4%, and corresponds to the figure for Beijing (see note 105).

Even without a global figure on the extent of the wastage and some variability in the statistics, it is evidently a significant problem. Although there is a relatively large figure of the lack of match of the speciality of graduates and their assigned jobs, this cannot all be put down to the fault of the higher education system. (The failures in the estimation of needs, in the assigning process, and the lack of any job mobility are problems not of the making of colleges and universities.) Perhaps more worrying in the long term is the rejection of graduates by units,¹⁰⁵ and unemployment (whether through an imbalance in the supply of certain specialities, or rejection by graduates of jobs allocated in rural areas). In recent years there have been general problems in placing graduates even under schemes where admissions to higher education are linked to job assignment.¹⁰⁶ All of the reasons discussed above are attributable to the quality, both professionally and politically, of the output from higher education.

The education crisis

I have taken this heading from the article already referred to: "The third crisis of education in China and its counter measures."¹⁰⁷ The author saw the Great Leap Forward and the Cultural Revolution as the other two crises, making it a controversial comparison. He identified a number of factors, some of which I have already dealt with: the shortage of funds for education; the poor position of teachers; the view that 'study is useless'; the slow pace of educational reform; the gap between education and economic development; poor instructional methods in higher education. The state of crisis was recognized by Deng Xiaoping using strong language: "the greatest error in the past ten years".¹⁰⁸ Discussion in the December 1988 meeting of the Standing Committee of the CCP Central

Committee, and in other meetings, culminated in the Political Bureau considering a draft decision on the development and reform of education to deal with the crisis.¹⁰⁹ This resulted in discussions among deputies at the Second session of the Seventh NPC and in a strengthening of the statements in Li Peng's government work report on the increase of funds to education.¹¹⁰ The commitment was to increase funds to education at a time when other government spending was falling. This happened at the NPC in 1984, when the State Council increased the 1984 growth in response to delegates' reactions.¹¹¹ In 1987, however, no concessions were made to the Fifth Session of the Sixth NPC when criticisms occurred.¹¹² There has been much discussion over the last 5 or 6 years about education funding with growth in spending being compared to economic growth.¹¹³ The government claimed that over the period 1980-88 the growth in education funding was greater than for overall growth in state funding, but this ignored inflation and educational spending still only varied between 11% and 12% in the period 1981-88.¹¹⁴ Such claims did not seem enough to reassure deputies who suggested a law to protect investment in education and to make sure that the government guarantees it.¹¹⁵ Even if spending was increasing in real terms the expansion of the system and the increasing costs of, for example, teachers' salaries, meant that the government could not keep pace with growth.¹¹⁶ In response to criticism the government is promising increased spending in the ten-year programme and the Eighth Five-Year Plan,¹¹⁷ but some of this is to come from non-government sources.¹¹⁸ This, however, is tempered by the view on educational investment that is less attracted to higher education spending (see Chapter 2), with Li Peng saying that such spending must be in line with economic development.¹¹⁹

The recognition that the government was not spending enough on education was part of a general disillusionment with its attitude to education. I have already discussed the effect this had on teachers and on drop-out among school children, but it had spread to college students. They saw it as, in the words of the popular phrase, "useless to study" (*dushu wuyong lun*). The survey of Fudan students, referred to earlier, showed that the traditional view of students studying hard was no longer true. Only 40% were studying in the morning between 8:00 and 10:00 am. The reasons for the lack of interest have all been dealt with: the poor salary prospects for a graduate, compared with those who go into

business; the poor job prospects in the city - the jobs are in the rural areas; poor teaching.¹²⁰ The general commercial spirit was making it hard to see why they should continue to study in such bad conditions, with such poor rewards.

In reviewing the crisis in education Smith (1988c, p.15) argues that the student unrest of 1986-1987 was in part calls for democracy and freedom, and in part an expression of frustration about the problems of education. In 1989 the demonstrations took a different turn as the world was to witness. Nevertheless the early demands from the student leaders included a call for increased funds to education and better remuneration for intellectuals.¹²¹ The putting down of the demonstrations by armed troops was followed by arrests and executions of students and others involved in what the government came to call a "counter revolution". Not surprisingly higher education was affected, with final examinations not being taken on time and the intake for 1989-1990 being disrupted. It is beyond the scope of this thesis to deal with this period, and I shall pick up only three aspects that followed the events because they relate to the halt in the expansion of higher education, to the perceived quality of it, and to a general unhappiness on the part of the government with the products of the system.

The first effect was the reduction nationally in the admissions to university, although it was particularly severe at Beijing University. The planned national intake had been 640,000 and this was to be reduced to 610,000 (in the event it was 597,000 - see Table 3.3), with Beijing University suffering a cut from 2,000 to about 800.¹²² The official reason for the cut in Beijing was that there were insufficient facilities for any more students.¹²³

A second effect was the curbing of the autonomy of the universities and colleges. For example, students would no longer have any choice over their job assignment and the experiments with this would be halted, along with an increase in the number being assigned to grass-roots' units.¹²⁴

The third and most profound was the programme of ideological and political education that was instituted in schools and colleges. In the government's view the cause was the incorrect thinking of the students. Not only were they the subject of sessions to convince

them of the government's view of events;¹²⁵ but more long-term programmes of political education were started. An article in *Guangming Ribao*, taking up Deng Xiaoping's views on the omission of ideological and political education, noted that young people had no interest in Marxism, and that the omission was the weak link in implementing the reform and openness policy.¹²⁶ Following this there were calls by senior government ministers, such as Li Peng, Jiang Zemin and Li Tieying, for a programme of ideological and political education in colleges, including a reassertion of the need for teaching Marxist theory.¹²⁷ For the new students of Beijing University this emphasis on ideological and political education meant a year's military training in the Shijiazhuang military camp south of Beijing.¹²⁸ Labour education was also mentioned in the context of ideological and political education by He Dongchang, Vice-Minister of Education, and a programme of manual labour started in Beijing secondary schools and colleges.¹²⁹

This policy of 'ideological and political education' continued under the term 'moral education' in the two years after the June 1989 events, with a stress on social investigation and involvement in labour.¹³⁰ In the summer of 1991 it was reported that two million students had gone to the countryside and industry to carry out social investigations.¹³¹ The thrust seemed to be less on ideological objectives *per se* than on trying to counter the disengagement of young people from the needs of China.¹³² Such disengagement could jeopardize the economic development of rural and backward areas of China, as well as the particular economic needs highlighted by the government.

So the assessment was, in effect, that the education system had failed to produce students with the correct socialist orientation.¹³³ Students' were too money oriented,¹³⁴ and according to *Renmin Ribao*:

"many belittle physical labour, practice and working people...don't do things for themselves, waste steamed bread and rice, do not understand China's history and reality....consider themselves superior and won't go to grass roots."¹³⁵

It appears, then, that the general ills of the higher education system were being recast as a failure of moral education, but not the kind of ideological education of the Cultural Revolution period. Problems of students' attitudes and values were combined with problems of job assignment, and students' inability to adjust to the needs of working

conditions in industry and agriculture. It is almost as if the education crisis, and particularly the subsequent events of 1989, were used as a trigger for a more aggressive government policy of changing the direction of higher education.¹³⁶ At the very least they seem to be using it as an excuse or explanation for the failings of the system. Thus it was that in August 1990 the State Education Commission established an Advisory Committee to deal with three questions: how to ensure higher education would adhere to a socialist orientation; how to get stable and harmonious development to meet the needs of modernization; how to reform, improve and rectify higher education.¹³⁷

The role for distance learning

As I noted in the introduction to the chapter an examination of the developments in conventional education in general provides both a context for distance education and an opportunity to see what role it can play in the development of higher education in particular. Obviously the policy development in higher education is the one that is most significant as a context for distance education, but the changes in primary and secondary education are also important. Here I will therefore reflect on how the conventional education system has developed, how that might affect distance learning, and on what roles it can play.

The developments in conventional higher education have complex implications for distance education. The initial growth in higher education, as I have already noted, encouraged distance education to expand both in response to economic needs and to demand. The cutting of that growth has obvious implications for distance learning institutions that have high student numbers, and in Chapter 4 and Part 2 I will examine how these institutions have been affected.

Whatever the policy implications of expansion, and its eventual limitation, it is clear that distance learning will have a role in both meeting the needs of the economy and the demand from the population for higher education. Conventional universities and colleges exhibit problems in meeting the needs of the economy: in supplying diploma graduates to rectify the balance with degree study; in producing graduates with specialisms suited to

industry; in producing graduates with the practical ability to fit in, apply knowledge, and solve problems; in determining the number of graduates needed and assigning them to where they are needed. In addition there are problems which arise from the teaching and learning in higher education, that ultimately have a bearing on the problems relating to the needs of the economy. It is therefore necessary to see to what extent distance education avoids these problems and can consequently offer a better quality of higher education.

At the beginning of the decade there would have been the question of whether the conventional sector could meet the demands for expansion required by the government, and distance education was indeed seen as a means of aiding this expansion.¹³⁸ With the cut in growth shown in this chapter the role of distance learning in the simple quantitative expansion of the system is not so important, as far as the government is concerned.

However, as I have indicated (Table 3.9), the chances of school leavers have declined with this cut in growth, and hence the conventional system is not attempting to satisfy the demand for education. The government has of course limited funding and would rather school leavers went into technical and vocational education, but the fact remains that the demand is there. In this situation distance education has a role, not only to take in school leavers, but also adults who want higher education and were denied the opportunity earlier in their lives. I will therefore investigate how far distance education satisfies both the needs of the economy and the demand for higher education.

The limits on funding also have implications for distance learning, firstly because as a form of adult education there may be less state support (see Chapter 4), and secondly because as Chapter 5 shows distance education is seen as a cost-effective way of providing education.

Finally the apparent disillusionment on the part of the government with the student body might lead it to turn to distance learning in an effort to avoid the political problems students have caused and to invest in learners who may be more in touch with the needs of China, and perhaps more grateful for the education they receive.

The recent reaffirmation of a concern for rural education and in particular for primary education has implications for distance learning that could, firstly, be used to improve the quality of teachers, and secondly, to reach rural areas where the conventional structures of education are weak. The first is of course an indirect role, but one appropriate for distance higher education. The second role (rural education) could make use of the lack of geographical limitations of distance education and give rural populations access to education. Rural education directed to farmers would not normally be a role for a higher education institution, although, as I will show in Chapter 5, there is such a distance education system. However, it is also the case that the RTVU has recently been given a brief of dealing with rural education, and I will consider this in Chapters 5 and 6.

All that I have said about rural education applies to the education of minority groups within China. They are mainly in the rural areas and so any access that such areas get could benefit minorities, although of course those in mountainous areas present special difficulties. There is an added problem of the language of instruction, especially for national distance education systems that base their teaching on 'standard Chinese' (*putonghua*).

The developments in secondary education still leave a problem with teacher quality, and hence a need for training, and a concern to increase technical and vocational education. Both have implications for distance learning. For distance education the implications of teacher training are the same as for the primary sector. But the implications of technical and vocational education come about as a consequence of the limits to expansion of higher education and its knock-on effect to the growth of distance education, especially the RTVU.

Before examining distance education it is necessary to consider the adult education system, of which distance education is a part. I turn to this in the next chapter.

NOTES

1. 'Economics in command' was the title of Schram's (1984) article, which at the time he posed as a question, in contrast to the Mao era of 'politics in command'. In a later article (Schram, 1988, p.196) he said there was no doubt about the dominance of economics, though the place of politics, and in particular democracy was less sure. Despite the place of economics in the period of 1978-84 Schram (1984) shows how there were continual arguments between the red and expert traditions (through issues such as 'alienation', 'bourgeois liberalization' and 'spiritual pollution').
2. The Compulsory Education Law of 1986 (SWB FE/8239/C1/7-10, 22 April 1986) allows for local authorities to determine the implementation date of nine-year schooling. The Seventh Five-Year Plan (SWB FE/8235/C1/23-24, 17 April 1986), and Li Peng's explanation of the Compulsory Education Law (SWB FE/8239/C1/1-7, 22 April 1986), gave 1990 for primary and junior middle school education in developed areas, primary education by 1990 and junior middle by 1995 (the Five-Year Plan actually says 1993) in medium developed areas, and primary education in backward areas before the end of the century.
3. SWB FE/0984 C1/12, 31 January 1991.
4. Rosen (1988, p.61) notes that this was part of the 'consolidation of quality strategy', and that the decline was reversed in 1984. His figures were only up to 1985, and later figures confirm this reversal, but show another decline starting in 1986. See Table 3.10 below (1977 is included to show the peak year for total number of middle school students).

Table 3.10: Enrolment in junior and senior middle schools (millions)

	1977	1980	1985	1986	1987	1988	1990
Jr	49.80	45.38	39.65	41.74	41.74	40.15	38.7
Sr	18.00	9.69	7.41	7.77	7.74	7.46	7.17

Sources: 1977 *Zhongguo jiaoyu nianjian bianjibu*, (1984, p.1001); 1980 & 1985 Department of Planning, State Education Commission, (1986, p.64); 1986 Jiang Shanye, (1988, p.33); 1987 SWB FE/0085, 23 February 1988; 1988 ZGJYB, No. 643, 31 December 1988, p.1-2; 1990 ZGJYB, No.991, 19 March 1991, p.2.

5. One recent measure to reduce the effects of competition is the introduction of a secondary school graduation examination (SWB FE/1050 B2/5, 19 April 1991. This will indicate the achievement of a student and give something tangible to those who are unable to go on to higher education. Later I examine the chances of getting into higher education.
6. Zou (1988), Gao & Xiong (1988) and Bott (1988) give general accounts of vocational and technical education.
7. SWB FE, 16 September, 1987.
8. Bott (1988, p.26) gives this figure for all secondary education, whereas it only applies to senior secondary education (Ministry of Education, China, 1986, p.6).
9. SWB FE/0984 C1/12, 31 January 1991.
10. There seems to be some inconsistency in the way figures are reported; for example, the 1984 figures of the various categories of secondary schools (Department of Planning, State Education Commission, 1986, p.5) compared with the percentages given by Cheng (1986, p.260) are:

Table 3.11: proportions of various types of senior secondary education

	Number (x10 ⁶)	SEC (%)	Cheng (%)
Specialized secondary	1.322	13.3	12.5
Senior secondary	6.898	69.2	65.0
Agriculture and Vocational	1.745	17.5	16.5
Total	9.965	100	94

The SEC gives the non-senior secondary as 30.8%, which is less than the 35% given by Cheng, because he has a further category called 'craft schools' which makes up the remaining amount. Figures

for 1985 are equally puzzling giving a total for specialized and agriculture and vocational schools of 34.3% compared to that of 36% in Table 3.1.

11. SWB FE/0681 B2/5, 6 February 1990.
12. The worries about drop-out and its continued increase indicated to some the failure of the Compulsory Education Law (*FBIS JPRS-CAR-89-090*, pp.56-58, 25 August 1989).
13. Li Tieying, addressing the State Education Commission national annual conference, declared the focus for 1990s was to be primary education (SWB FE/0666 B2/2, 19 January 1990). He gave the reform of education in rural areas as the main objective in the short term (SWB FE/0667 B2/2-4, 20 January 1990).
14. Deng (1983, p.144) reports that problems in primary education were caused by teachers being transferred to junior secondary schools.
15. Surveys of opinion and interviews of students and teacher trainees paint a depressing picture of the prospects of encouraging students into teaching (SWB FE/0148 B2/2, 11 May, 1988; FE/0192 B2/4, 1 July 1988; FE/0375 B2/6, 3 February 1989).
16. A problem reported in Guangdong (*FBIS JPRS-CPS-86-033*, 25 April 1986), despite "stipulations that they are not recruitment targets". More generally large numbers of teachers are said to be resigning to find better paid jobs (SWB FE/0451 B2/6, 5 May 1989).
17. SWB FE/0125, 14 April, 1988; FE, 20 August, 1988; Lewin & Xu, 1989, p.15).
18. SWB FE/0420/C1/1, 29 March 1989. The need to attract teachers by increasing their salaries is even a problem for Beijing (SWB FE/0412 B2/6, 18 March 1989).
19. There are two certificates, one for those who have worked for one year and another for those who have taught for two years or more and who have obtained the first certificate. The first one is called 'Certificate for Teaching Method for Teaching Material' (*jiaocai jiaofa kaoshi hege zhengshu*), and the second 'Qualified Professional Certificate' (*zhuan ye hege zhengshu*). For each there are different requirements for primary, junior secondary and senior secondary school teachers, and the regulations specify separate course requirements for the 'professional certificate'. These regulations are reproduced in Guan (1989, pp.150-4).
20. Mr. Wang Yuanlin, Director, Teacher Training Department, State Education Commission, interview 19 May 1990. The Eighth Five-Year Plan had the improvement of teacher quality as one of its main tasks (SWB FE/1041 C1/7, 9 April 1991).
21. Mr. Wang, of the State Education Commission, mentioned this in relation to the training programme provided by the Television Teachers' Institute (see Chapter 5), but there are reports of conventional courses (SWB FE/0604 B2/7, 3 November 1989).
22. SWB FE/0963 B2/5, 7 January 1991.
23. They were discussing a report from the State Education Commission and raised minority education along with the issues I have discussed already (SWB FE/0204 B2/3-4, 15 July 1988).
24. The terms for this sector can be confusing. *Putong daxue*, 'regular universities', is the usual term to denote the conventional universities. But they are sometimes called *quanrizhi gaodeng xuexiao*, 'full-time higher education schools' (e.g. *State Council Bulletin*, No.11, 1983, p.429), which is confusing because some of the adult higher education institutions involve full-time study!
25. In Chapter 5 I will examine the hopes that proponents of distance learning have for this type of education, and how those in China viewed these hopes.
26. In fact following the USA terminology this is usually called 'graduate' education, although the term in Chinese for graduate student is *yanjiusheng*, 'research student'. Sidel (1983) gives an account of the development of graduate education, and Julia Kwong was guest editor to a collection of translations in

Chinese Education: 'Graduate Programs in the People's Republic of China' Chinese Education, 1985, Vol.18, No.3.

27. These include *zhuanke* (diploma), *benke* (degree), *shuoshi xueli* (Master's degree), and *gongdu boshi* (Doctorate). Ministry of Education, China, (1981) gives details of the re-introduction of academic qualifications.
28. This was introduced in 1977 and Sidel (1982a) gives an account of its development in the first few years of its operation. Taylor (1981) is the definitive work on all aspects surrounding admission to higher education since 1949, although it only contains details of the 1977 examination. Sidel (1982a) and Rosen (1985a, p.311) document how the examination, and the conditions for sitting it, became more difficult over the years up to 1984 with the result that fewer took it.
29. Pepper (1982) gave early indications of decentralization to universities, though Rosen (1985a) saw central government exerting increasing control over the key universities it was directly responsible for. He gives details of autonomy over enrolment. Kwong (1987) discusses in detail staff and use of income from entrepreneurial activity. Huang (1985) gives the same list of aspects of autonomy noted by me, and these and other aspects became the subject of a State Council circular defining responsibilities in the administration of higher education, which gave institutions more independence and flexibility (SWB FE/8281/BII/1-2, 10 June 1986; SWB FE/8284/BII/15-17, 13 June 1986). Zhou (1989, Chapter 7) gives an account of both the external and internal administration of universities.
30. For example, these were the aspects identified by Zhao Ziyang in his report, as Premier, to the Fourth Session of the Fifth NPC on the 30 November and 1 December, 1981. (He also spoke of the need to expand higher education, diversify the kinds of it and improve its quality; all issues I will take up later.)
31. See for example the GMRB (27 January 1983) commentary *University reform is a forgone conclusion* (SWB FE/7256/BII/15-16, 12 February 1983).
32. Lewin & Xu (1989, p.16) conclude that the most significant aspect of the 1985 reforms was the autonomy of higher education, and its effect on finance and supply and demand for graduates.
33. Ironically the State Education Commission's goals and plans for 1989 are much the same as those at the beginning of the decade. They included, under 'Deepening educational reform', the reform of the admissions and job assignment systems, and under 'Regular higher education' improving the structure of disciplines and the adjustment to subject specialities (FBIS JPRS-CAR-89-064, p.66-72, 22 June 1989). Reform takes time!
34. Indeed Deng Xiaoping, in his speech at the forum on work in science and education in 1977, advocated this approach for higher education (Deng, 1984, p.67). At a higher education conference in 1983 He Dongchang, the Vice-Minister of Education, spoke of developing a multi-structure, multi-form system including radio and television, correspondence, and night universities.
35. ZGJYB, No.983, 5 March 1991. However, there was supposed to be an intake of 625,000 in 1992 (*The Times Higher Education Supplement*, 22 November 1991, p.9).
36. SWB FE/1041 C1/7, 9 April 1991.
37. Emerson (1968) gives a general description of educational planning in the context of labour planning for the period before the Cultural Revolution. Henze (1984, pp.133-137) gives a brief description of the planning of higher education.
38. The Seventh Five-Year Plan did not specify any enrolment figures.
39. SWB FE/1023 C1/5, 18 March 1991. Using the figures given in Table 3.3 a figure of 2,626,000 is obtained.
40. FBIS JPRS-CAR-89-050, pp.26-30, 22 May 1989. I will come back to his argument when I consider the needs of the economy.

41. *FBIS JPRS-CAR-89-064*, pp.66-72, 22 June 1991.
42. Li Peng said this in a speech to the International Symposium on Education for the 21st Century in November 1989 (*SWB FE/0657 B2/2*, 9 January 1990). The higher education details of the Eighth Five-Year Plan were reported in *SWB FE/1058 C1/20*, 29 April 1991.
43. *SWB FE/8211/BII/15-16*, 19 March 1986.
44. *SWB FE/8236*, 18 April 1986.
45. In fact Suttmeier (1980, p.55) predicted a massive shortfall, based on an estimate of the output of higher education during that period 10% lower than the actual figure.
46. Dong (1989, p.64), the Director of the Third Higher Office of the State Education Commission, said that there were too many degree-level graduates and insufficient diploma ones.
47. *ZGJYB*, No.752, 19 September 1989, p.4, gives a figure of 35%, more in line with the trend, but not as authoritative as the data used in the table. Zhou (1989, p.141) gives similar enrolment ratios:

1982	1985
24%	33%
48. Unfortunately the data in his tables for proportions of actual enrolment (Zhou, 1989, p.148) do not match those given in the source he uses for predictions (p.155), so it is only possible to give a qualitative judgement.
49. Although Zhou (1989, p.148) charts proportions of enrolment data, proportions of graduates data are much the same.
50. Thus in engineering the degree graduates represent 40% of all degree graduates, compared to 31% when using the combined degree and diploma figures (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, p.30-31). This implies that there needs to be a greater reduction in engineering degree graduates (or less of a reduction in diploma graduates). A similar situation arises in medicine, and a converse situation for finance and economics. Government and law is, however, the odd one out.
51. Wang analyses the success of senior secondary school students getting into higher education, in terms of the supply of students, for the years 1949-1984 (*FBIS JPRS-CPS-86-064*, p.41-58, 19 August 1986). A more superficial statistical analysis is given in: *Gaokao shi nian huigu*, (A review of ten years of the higher education entrance examination), *ZGJYB*, No.333, 27 December 1986, p.3.
52. The fact that the 1990 figure for examination candidates is larger than the number leaving school probably indicates an accumulation from the previous year(s), possibly yet another result of the events of June 1989.
53. Rosen (1988, p.63) puts the percentage of the age cohort in higher education in 1985 as 2%, and this figure was still used in 1989 (*SWB FE/0410 B2*, 16 March 1989). A State Education Commission official writing in 1988 talked of 3% (*FBIS JPRS-CAR-88-055*, p.12-16, 16 September 1988).
54. Rosen (1988, p.63) quotes a figure of 18.51% based on an admission figure of 364,000. This does not conform to the State Education Commission figure for *benke* admissions quoted in Table 3.9. Rosen says this is for the 'academic stream' (p.65), which I take to be *benke* students.
55. However, another source (*FBIS JPRS-CPS-86-063*, p.23-24, 18 August 1986) gives the figure as 1.76 million, which does not conform to the growth that appears to be taking place in this statistic, so I have opted for the higher value of 1.91 million.
56. The only figure I have for senior secondary school graduates is 585,000 which is too low for the growth that is evident, and would give a total admission ratio (*d/b*) of almost 100% (*FBIS JPRS-CPS-86-049*, p.36, 27 May 1986).
57. A higher figure of 2.47 million is given in another source (*FBIS JPRS-CAR-88-055*, pp.12-16, 16 September 1988), but again it does not conform to the growth of this statistic.

58. This figure is given by a State Education Commission source when discussing the chances of senior secondary school graduates getting into higher education, which could be assumed to be the *benke* admissions (*FBIS JPRS-CAR-88-055*, p.12-16, 16 September 1988). As it is so high it is likely that some of these school graduates would have gone to *zhuanke* courses. It is, however, unlikely that the 17% for the *benke* admissions ratio would include all those admitted to both *benke* and *zhuanke* courses.
59. Although it appears reasonable, it is in fact the percentage of those who *sat the higher education entrance examination* and who were admitted to higher education, not of those who were senior secondary school graduates. It uses 2.47 million examination candidates (see note 55), and 420,000 admitted to *benke* (given in Table 3.9).
60. *SWB FE/0098 B2/5*, 12 March 1988. Another source gives the success rate of the 2.275 million examination candidates as 30%, but this also includes 52,000 who can enter the RTVU and the correspondence and evening university departments of regular universities (*ZGJYB*, No.413, 7 July 1987, p.1).
61. Another source estimates that 27.2% of the (estimated) 2.48 million senior secondary school graduates would get into higher education (*SWB FE/0098 B2/5*, 12 March 1988), which is close to the 27.0% figure I calculate using this 2.48 million estimate.
62. This is an estimate given in *SWB FE/0098 B2/5*, 12 March 1988. This source also gave an estimate of 28.8% for the 1990 ratio, which turned out lower (26.1%).
63. Rosen (1982, p.34) thought that the pressure in the best schools may be reduced by the use of quotas and school recommendations. This does not seem to have been achieved as more recently State Education Commission regulations have been issued to stop the abuses that result from such pressure; abuses such as too much homework, cheating, division of students into separate subject groups for the entrance examination (*SWB FE/0163 B2/4*, 28 May 1988). The recent introduction of the secondary school graduation examination (see note 5) was the result of these continuing worries about the effect of competition.
64. He Dongchang, the then Minister of Education talked of the need to develop vocational education as an alternative to higher education (*SWB FE/7409/BII/14*, 11 August 1983).
65. Rosen (1988a) considers the effects of failing to enter higher education on attitudes and behaviour, including drop-out, which I considered earlier, and also the link with rising crime.
66. *SWB FE/7968/BII/1-10*, 4 June 1985.
67. In a recent press conference given by Li Tieying and He Dongchang, the two most senior ministers in the State Education Commission, it was stated that some 200 higher education institutions were not able to meet the minimum requirements of the state (*SWB FE/0420/C1/1*, 29 March 1989).
68. *FBIS JPRS-CPS-87-011*, pp.68-69, 13 March 1987; *FBIS JPRS-CPS87-011*, p.70-74, 13 March 1987; *SWB FE/0246 B2/5*, 2 September 1988.
69. This is not generally available but I used the English version: *World Bank Loan Project (Chinese Polytechnics), Statistical Data of 1985 Graduates Tracer Study by 17 Chinese Polytechnics*, National Polytechnic Tracer Study Group, (mimeograph), October, 1989. No other publication details are given. These colleges provide two- or three-year diplomas (*zhuanke*).
70. See Yao (1972) for an account of science and technical education in the Soviet phase, and Orleans (1987) for how the current policies represent a break with this influence.
71. In her Ph.D. thesis (Hayhoe, 1984b), she argued that the emerging model reflected that found in the USA, and in her later book (1989b) she added to this the influence of the World Bank which widened the range of western models of higher education that China was exposed to.
72. *FBIS JPRS-CPS-85-080*, pp.55-56, 8 August 1985. Hayhoe (1989b) talks of interdisciplinarity only in the general terms of the 1985 reforms.

73. *FBIS JPRS-CPS-87-011*, pp.70-74, 13 March 1987. I will deal with this survey and two others in more detail later.
74. *Op cit* note 67.
75. For example see Johnson's (1989) account of how economics has changed to make it more applied. Surveys of students show their concern about the lack of opportunity to study outside the university, with too much emphasis on book knowledge, and the fact that the theory is divorced from reality (*FBIS JPRS-CPS-87-011*, pp.68-69, 13 March 1987). A survey of the units to which Fudan graduates had been sent revealed that, although their basic knowledge was sound, they could not handle practical problems (*FBIS JPRS-CPS-85-080*, pp.55-56, 8 August 1985). The survey of the employers of polytechnic graduates (see note 69) indicated that they were able to apply knowledge and solve problems (Tables 63 & 65).
76. Attempts to improve such links include students in Shanghai working in industry as part of their course, in a form of internship (*SWB FE/0755 B2/5*, 4 May 1990), and introducing a 'sandwich course' approach in polytechnics, with some periods spent in industry (World Bank (1988b, p.132); *SWB FE/0583 B2/3*, 10 October 1989).
77. *SWB FE/8671/BII/2-3*, 12 September 1987. Two World Bank funded studies of polytechnics by western 'experts' commented on the lack of industrial experience of the staff (World Bank, 1988a&b).
78. Indeed students have suggested part-work, part-study as a way of developing the skills they think they need (*FBIS JPRS-CPS87-011*, pp.70-74, 13 March 1987).
79. *FBIS JPRS-CPS-86-001*, pp.91-92, 7 January 1986.
80. Students in the Fudan survey said methods had not changed for decades (*SWB FE/0246 B2/5*, 2 September 1988).
81. *FBIS JPRS-CPS-87-011*, pp.68-69, 13 March 1987; *FBIS JPRS-CPS-86-079*, pp.13-16, 17 October 1986.
82. *FBIS JPRS-CAR-89-030*, pp.34-35, 6 April 1989. More depressingly perhaps is the fact that some 50 years after the founding of *Kangda* the current National Defence University is only now abolishing the cramming method! (*SWB FE*, 21 December 1985)
83. *FBIS JPRS-CPS-87-011*, pp.68-69, 13 March 1987.
84. The World Bank's first University Development project had the improvement of teaching in science and engineering as one of its aims, and Hayhoe (1989b, p.173) claims success for this aspect.
85. *FBIS JPRS-CAR-90-025*, p.41, 30 March 1990. Herschede (1979, p.70) examines sceptically the government's desire to increase staff qualifications.
86. Student survey: *FBIS JPRS-CPS87-011*, p.70-74, 13 March 1987. Other reports: *FBIS JPRS-CPS86-079*, p.13-16, 17 October 1986; *CPS-86-016*, p.56-65, 3 February, 1986. Most western commentators on the 1985 reforms mention this aspect of learning reform; Lewin & Xu, (1989), is an example of the latest.
87. An example of such a report was from a joint investigation by the national CCPCC working group for education and culture and the Beijing Municipality Higher Education Group into higher education in Beijing (*FBIS JPRS-CAR-89-06*, p.64-5, 16 June 1989). Half the universities in 1987 had audio-visual facilities, with an average of 15 full-time and 15 part-time specialized staff. Up to that date 1.3 million hours of video-tapes and 1 million audio-tapes had been produced (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1988, pp.104-5).
88. *FBIS JPRS-CPS-87-011*, pp.68-69, 13 March 1987. More general references to the reform of examinations come from educators, for example, Lu Yongxiang of Zhejiang University (*FBIS JPRS-CPS-086-079*, pp.13-16, 17 October 1986).

89. This was most common in the early 1980s, for example: *NFRB*, 26 June 1983, p.1. An alternative phrase is 'production and marketing meet' (*chan-xiao jianmian*), *WHB*, 20 April 1983.
90. I will deal with the extent of the mis-match later. General reports and articles over the years on this are, for example: *GJZX*, No.2, pp.7-8, 13 February 1983; *SWB FE/0017 B2/4*, 4 December 1987; in Shanghai in 1988 it seemed to be a particularly bad problem, see *Jeifang Ribao*, 27 May 1988, p.6 (*FBIS JPRS-CAR-88-047*, 19 August 1988) and *Shanghai Zhibu Shenghuo*, No.9, pp.31-32, 6 May 1988 (*FBIS JPRS-CAR-88-069*, pp.34-36, 4 November 1988).
91. Zhou (1989, pp.117-128) give the most comprehensive review of the system.
92. Wei Zhi (1984), 'Actively reform the enrolment source plan', *GJZX*, No.5, pp.22-24 (translated in *Chinese Education*, 1986, pp.59-66)
93. This was included in criticisms of the blindness in higher education recruitment in 1980: *Yao kefu zhaosheng, peiyang, fenpei gongzuo zhong de mangmuxing* ('Overcome the blindness in recruiting, developing and allocating students') *RMRB*, 27 September, 1980; *Zenyang kefu gaoxiao zhaosheng he fenpei gongzuo de mangmuxing* ('How to overcome blindness in higher education recruitment and job assignment') *GMRB*, 6 December, 1980. It was also noted in a Ministry of Education circular (*SWB FE/7285/BII/11*, 18 March 1983), and was discussed in a more recent study of job assignment problems in Shanghai: *Jeifang Ribao*, 27 May 1988, p.6 (*FBIS JPRS-CAR-88-047*, pp.55-56, 19 August 1988).
94. For example the case of a Chinese literature graduate in Shanghai selling cigarettes, because he could not get a job (*SWB FE/ B2/8*, 14 March 1989). As I shall note later it is likely that this is because urban students are unwilling to leave large cities. On the other hand Lin, W. (1985, p.28) talks of the need for graduates in the humanities to retrain because of a lack of jobs. Interestingly commentators such as Zhou (1989), who study both the reform of specialisms and job assignment, do not make the link between the employability of certain kinds of graduates and the balance of output in these specialisms. Most of the sources for the requirements of various areas (e.g. management and finance) are based upon surveys or projections of the needs of the economy.
95. This is partly an issue of the discrimination against women graduates (e.g. *SWB FE/0456 B2/4*, 13 May 1989; *SWB FE 7* August 1987).
96. This is an issue taken up by many commentators who relate it to the development of a job market (e.g. Johnson, 1989; Lewin & Xu, 1989; Smith, 1988b). I will take this up later. Zhou (1989, pp.125-28) discusses the reforms of job placement and the problems with their implementation.
97. Problems about the lack of practical ability were found in a survey of graduates in Shandong (*ZGJYB*, No.353, 17 February 1987, p.1), and orientation and attitudes of graduates in a discussion of the problems with job assignment (*FBIS JPRS-CAR-88-069*, pp.34-36, 4 November 1988).
98. In 1980 letters of a sister and brother were published to illustrate the service to China of going to a remote place (*GMRB*, 16 July 1980); 1981 examples of graduates volunteering to go to remote areas (e.g. *WHB*, 27 June 1981, p.1); 1982 Yao Yilin addressing graduates encourages them to go rural areas (*SWB FE/7076/BII/11-12*, 13 July 1982); 1983 He Dongchang, minister of education, urged graduates to throw themselves into the task of modernization and go to grass roots (*GMRB*, 26 June 1983); the 1984 graduate assignment plan by the State Planning Commission said too few were going to remote areas (*SWB FE/7769/BII/9-10*, 9 October 1984). Various incentives were tried (see note 102) but in 1989 there were still calls for more to go to grass-root units (*SWB FE/0437 B2/4*, 13 May 1989).
99. A recent report claimed that in cities there was now a 'rush' on secondary technical and vocational education because, rather than go to university and be posted to small towns, young people can stay in the city after graduation (*SWB FE/1066 B2/2* 8 May 1990). Also the salary difference may not in the end be any different because such school graduates get into the job market quicker and progress up the pay scales (*FBIS JPRS-CAR-91-025*, pp.78-80, 8 May 1991).
100. *Op cit* note . These devices along with contracts were seen as part of the various reforms in 1985 (*FBIS JPRS-CPS-86-016*, 3 February 1986; *CPS-86-86-023*, 5 March 1986). The 1983 job assignment regulations allowed better pay for graduates willing to go to remote areas and a limited posting of 8 years to Tibet, after which they can return to their home area (*SWB FE/7391/BII12-13*, 21 July 1983);

the 1985 regulations also contain something on this (SWB FE/7965/BII/2, 31 February 1985). More pay was also offered to those who were willing to go to township enterprises, rather than state ones (SWB FE/0523 B2/8, 1 August 1989). In 1987 most of graduates were assigned to grass-root units not State organs for two years (SWB FE/8610/BII/8, 3 July 1987), and in 1989 party and government organs at or above provincial level were not allowed to directly employ university graduates, who had to do 2-3 years at grass root units first (SWB FE/0543 B2/6, 24 August 1989). Li Peng in his work report to the NPC talked about job assignment and emphasized the need to reinforce the grassroots as part of the 1990 tasks for education.

101. For example, in reporting the success of getting 60% of Dongbei Normal University graduates to go to grass root schools, mention was made of the importance of ideological and political education by universities (ZGJYB, No.408, 25 June 1987, p.1). It was also mentioned by the State Education Commission in the context of preventing the 'interference of unhealthy trends', such as bribing (SWB FE/0456 B2/4, 13 May 1989). There have been continual references to malpractice in job assignment, stemming from the desire to avoid moving away from home (city) areas. For example, in the immediate post-Mao era the CCP Central Discipline Inspection Committee issued a notification on interference (WHB, 6 July 1979), and in a recent survey of the problems of job assignment worries were expressed about 'back door' entry to jobs (FBIS JPRS-CHI-90-136, pp.30-34). Also graduates just don't report for duty.
102. Gu Minyuan, 'The development of contemporary higher education and the reform on higher education in our country', FBIS JPRS, No. 459, pp.22-38, 22 September 1983.
103. SWB FE, 8 June 1988. In 1981 and 1982, 20,000 out of 600,000 graduates (3%) were in jobs unsuited to their training. Another estimate said 1.2 million science and technology personnel were in jobs outside their speciality, and 0.8 million in jobs where their expertise was not utilized, in other words the job was at too low a level (Wen Yulin, 'Gaige rencai peiyang moshi, jie xuede shezhi zhuan'ye' (To reform patterns of personnel training, utilize academic courses to set up special fields of study), GDJYYJ, No.2, 1983, pp.22-26 & 17. It was estimated that 3.7 million graduates had been allocated since liberation so the numbers mis-allocated are a large percentage (Gao Xuepei, 'Sum up experiences and adopt measures to effectively improve the system of assigning graduates of schools of higher learning', GDZX, No.2, 1982, pp.7-8, (FBIS JPRS, No.461, pp.23-27, 11 October 1983)). Zhou (1989, p.123) quotes from a "recent survey" that of 30,000 middle-aged professionals in 500 enterprises only 24.3% were fully employed.
104. In Beijing 655 were unemployed, 14% not being satisfied with their allocation, and the rest rejected by the employing unit (SWB FE/8719/BII/3-4, 7 November 1987). In that year there were 37,000 graduates which gives a percentage unemployed figure of 1.9% (SWB FE, 17 February 1988).
105. According to a report in *Liaowang* such difficulties started in 1987 and continued through 1988 and 1989 (FBIS JPRS-CHI-90-136, pp.3034, 16 July 1990). Apart from the rejection for the reasons I have already noted, there is evidence of discrimination against women graduates, although this has nothing to do with their quality. Warnings against such rejection have been given in the two latest State Education Commission annual pronouncements on job assignment (SWB FE/0192 B2/3-4, 1 July 1988; FE/0456 B2/4, 13 May 1989). This issue is covered in more general terms in a complete issue of *Chinese Education*, 'Women, education and employment', *Chinese Education*, Vol.22, No.2, (Summer) 1989.
106. There are several symptoms of this:
 - a. not all of the graduates are allocated by the State (66,000 in 1988 - SWB FE/0574 B2/5-6, 29 September 1989; 100,000 in 1990 - SWB FE/0781 B2/6, 4 June 1990), only those admitted under the unified (admission and assignment) system (SWB FE/0800 B2/6, 26 June 1990), and even here there are difficulties as deputies to the Second Session of the Seventh NPC noted (SWB FE/0429 C1/4, 8 April 1989);
 - b. there is a general reduction in the jobs available (FBIS JPRS-CHI-90-136, pp.30-34, 16 July 1990);
 - c. in some cities there is a large oversupply; for example in Beijing there were 33,000 graduates, for only 8,000 jobs, although 13,000 were allocated (SWB FE/0722 B2/3, 26 March 1990).

However, graduates of polytechnics seem to have less trouble, with 90% of those in Beijing getting jobs (Zou, 1988, p.239).

107. *FBIS JPRS-CAR-89-030*, pp.34-35, 6 April 1989. Other articles from Hong Kong newspapers also spoke of the crisis in education and indicated the same factors at the root of it: "Why has education in China been so neglected?" (*FBIS JPRS-CAR-89-027*, pp.63-4, 29 March 1989); "How serious the crisis in China's education is" (*FBIS JPRS-CAR-89-047*, p.52-4, 17 May 1989).
108. A phrase recalled by Zhao Ziyang (*SWB FE/0438 B2/8*, 19 April 1989).
109. Discussions had also involved the State Council (*SWB FE/0431 B2/2-3*, 11 April 1989; *FE/0438 B2*, 19 April 1989).
110. Deputies from Shanghai questioned Zhu Kaixuan, Vice Chairman of the State Education Commission (*SWB FE/0429 C1/4-5*, 8 April 1989), and they modified Li Peng's government work report (report given in: *SWB FE/0416 C1/1-9*, 29 March; modification: *FE/0427 C1/8*, 6 April 1989).
111. *SWB FE/7651/C/4* 24 May 1984.
112. *SWB FE*, 7 April 1987.
113. Comparisons are also made with other countries, in much the same way as for higher education participation rates. He Dongchang expressed it in terms of proportion of the state budget which puts China, with 20%, at the bottom of the international average of 20-25%, and slightly below that of developing countries, 22-24% (*SWB FE*, 28 June 1988). In terms of a proportion of national income China at 3% is half of the 6-7% of developed countries.
114. *ZGJYB*, No.674, 21 March 1989, p.1.
115. *SWB FE/0600 C1/4*, 30 October 1989.
116. *FBIS JPRS-CAR-89-063*, pp.64-65, 6 February 1989; *SWB FE/0681 B2/5*, 6 February 1989. Indeed Li Tieying, the Vice-Premier, State Education Commission, recognized there would be a decline in spending in real terms (*SWB FE/0651 C1/2-3*, 1 January 1990).
117. *SWB FE/0987 B2/3*, 4 February 1991; *SWB FE/1058 C1/20*, 29 April 1991.
118. *SWB FE/0982 B2/2*, 29 January 1991.
119. *SWB FE/0559 B2/2-3*, 12 September 1989.
120. *SWB FE/0246 B2/5*, 9 February 1988. A discussion with three students revealed how they were disillusioned with, for example, the fact that their former classmates who failed the higher education entrance examination were now better off than they were (*SWB FE/8450/BII/5*, 24 December 1986).
121. It was one of the seven demands (*SWB FE/0440 B2/2*, 21 April 1989).
122. Explaining this training a State Education Commission official said that it was not a punishment, but was part of a consistent policy followed since 1949. Indeed they had wanted to do it in 1988, but were unable because of lack of capacity on part of the army (*SWB FE/0587 B2/4-5*, 14 October 1989).
123. Zhou (1989, p.206 & 209) says that *Beida* admissions had been cut during the 1988-89, and his statistics show a fall prior to this, with overcrowding and poor facilities being the reason. He was writing before the events of June 1989. In 1990 the admissions recovered somewhat with 1,600 entering *Beida*, or rather entering military training for a year before going to university (*SWB FE/0859 B2/9*, 3 September 1990).
124. *Times Higher Education Supplement*, 10 November 1989, p.9. The experiments with the reform of job assignment were, however, continued as part of the State Education Commission tasks for 1990 (*SWB FE/0667 B2/2-4*, 20 January 1990).
125. This was to be a month of classes during the vacation for secondary and college students (*SWB FE/0509 B2/3-4*, 15 July 1989), and classes in the autumn term for primary schools (*SWB FE/0521 B2/9*, 29 July 1989).

126. *GMRB*, 23 June, 1989 (SWB FE/0496 B2/8-9, 30 June 1989).
127. At the higher education conference in July (SWB FE/0510 B2/1-2, 17 July 1989). This, combined with a defense of Marxism carried in *Renmin Ribao* (12 July 1989), could be seen as a counter to the influence of Fang Lizhi, the former President of Anhui University, who dismissed Marxist theory.
128. SWB FE/0536 B2/4, 16 August 1989. See also note 130.
129. He was speaking to the new students of Beijing University who were starting their military training at Shijiazhuang (SWB FE/0590 B2/6-7, 18 October 1989). The programme of manual labour was reported in: SWB FE/0559 B2/3, 12 September 1989. However, He Dongchang also saw this as part of supporting educational spending (SWB FE/0574 B2/6, 3 October 1989).
130. Stress on moral education and education and productive labour are found in statements by Li Tieying, Vice-Premier, State Education Commission (SWB FE/0651 C1/2-6, 1 January 1990), and the CCP Central Committee discussions (SWB FE/0984 C1/12, 31 January 1991).
131. SWB FE/1128 B2/6, 19 July 1991. Reports on social investigations and social practice started from late 1989 (e.g. SWB FE/0577 B2/6, 3 October 1989) and continued through 1990 (e.g. *FBIS JPRS-CAR-90-024*, pp.17-22, 29 March 1990) until 1991.
132. All the reports talk of students understanding the national conditions or the reality of industry and agriculture. There have, however, been discussions that returned to the 'red and expert' language of the Cultural Revolution period (e.g. *FBIS JPRS-CAR-89-100*, pp.5-10, 4 October 1989; *FBIS JPRS-CAR-89-106*, pp.49-51, 26 October 1989). But a *RMRB* editorial, in the immediate aftermath of the *Tiananmen* events, said that it was wrong to use schools as tools for class struggle and ignore their important role in the development of production (as was done in the Cultural Revolution), but that political and ideological education should not be neglected (SWB FE/0535 B2/2-3, 15 August 1989).
133. In fact Deng Xiaoping had said that the worst omission in the past 10 years had been education, but by that he had meant political and ideological education (SWB FE/0496 B2/8-9, 30 June, 1989). He Dongchang stressed the need for socialist orientation following the June events (SWB FE/0535 B2/2, 15 August 1989).
134. A comment by Jiang Zemin at the higher education conference (SWB FE/0510 B2/1-2, 17 July 1989).
135. SWB FE/0535 B2/2-3, 15 August 1989. Other reports in 1990 talked of the students being selfish, materialistic and feeling superior to workers and peasants (*FBIS JPRS-CAR-90-040*, pp.20-22, 29 May 1990; *FBIS JPRS-CAR-90-044*, pp.19-21, 11 June 1990).
136. For example, the problem of the effects of competition that encouraged young people, and the schools they attended, to concentrate on getting into higher education has been a continuing one (and one not unique to China). This is the result of the system of examinations and the economic and social rewards that higher education (sometimes) affords. But following the June 1989 events it was cast as a failure of moral education (SWB FE/0865 C2/7, 10 September 1990).
137. Li Tieying gave these three questions while addressing the first enlarged plenary of the Advisory Committee on the Work of Institutions of Higher Education (SWB FE/0842 B2/1, 14 August 1990).
138. Indeed when I was writing in the mid-1980s (McCormick, 1986, pp.74-75) I examined this situation assuming that only with the help of distance education could China reach the levels of higher education that its plans of that period assumed (the 1983 plans - see Table 3.6). In the event the conventional system met the targets, and in any case the government halted the expansion.

CHAPTER 4 CHINESE ADULT EDUCATION POLICY AND PRACTICE

INTRODUCTION

The conventional higher education system, largely for middle school leavers, is only part of higher education in China. Adult education provides a large contribution to higher education, and distance education forms the major part of adult higher education. The changes in policy towards adult education have directly affected the development of the distance learning systems, and these changes are important in understanding the changing role and development of the systems. In this chapter I will first consider the policy and development of adult education in general and adult higher education in particular. I will then examine how adult higher education was initially developed to meet the apparent *needs of the economy* and the *demand* for higher education, and the effect of the change in policy that took place in the 1980s. This will provide an overview of the role of distance education for the detailed examination of individual systems in Part 2. Such an approach is founded upon the belief that distance education systems cannot be studied adequately outside the context of the country and its education system, a predilection of distance learning 'theorists' that I noted in Chapter 1.

Adult education in China is much admired internationally,¹ although there has not been as much study of it compared to the regular system.² Because of this it is worth outlining the range and roles of adult education in China, before considering the details of the policy context.

RANGE AND ROLES OF ADULT EDUCATION

There are in fact a variety of ways of classifying adult education, according to:³

- a. the level of education provided, especially when matched to the conventional system (i.e. primary and middle schools, higher education), but also literacy classes, short-term and specialized courses;
- b. target group i.e. industrial workers, cadres, and agricultural workers (as I will show later this is confused somewhat by the diversion of secondary school leavers directly to adult education);

- c. time commitment to study i.e. full-time, part-time and spare-time;
- d. who runs the particular institution or class e.g. an enterprise (usually large), a local education authority, a national ministry (e.g. mining), other national organizations (in particular the All-China Federation of Trades Unions and Communist Youth League), and also conventional universities (correspondence education and evening universities).⁴

Using the above dimensions leaves out such activities as campaigns (e.g. to promote the 'one child' policy) and more purely political propaganda activities (e.g. newspaper reading groups).⁵ But the current use of the term 'adult education' rather than 'spare-time education', or indeed 'worker-peasant education', indicates better the breadth of activity that is covered.⁶ It is actually hard to pin down exactly what is distinctive about adult education in China; it is possible, for example, to find middle school graduates who go straight in to full-time study for a diploma (*zhuanke*), in an adult education institution run by a provincial education authority.⁷

Whatever the difficulties of specifying adult education definitively all the distance learning systems of concern in this thesis are part of adult education. But, at the higher education level, only the RTVU and correspondence education are included in official statistical reports of adult education. The types of institutions specified in such reports are:⁸

1. Staff and Workers' universities (*zhigong daxue*) which can be run by large enterprises or by local education authorities.
2. Rural (peasant) universities (*nongmin daxue*), run by local education authorities.
3. Independent correspondence education institutions (*duli hanshou daxue*), run by ministries other than education (e.g. post and telecommunications).
4. Administrative cadre training institutions (*guanli ganbu xueyuan*), run by local education authorities, the State Council and central government ministries.
5. Evening colleges and divisions of correspondence education run by regular institutions of higher education (*putong gaodeng xuexiao juban de yedaxue*, *putong gaodeng xuexiao hanshou bu*).
6. Radio and Television Universities (*guangbo dianshi daxue*).
7. Educational colleges (*jiaoyu xueyuan*) that provide inservice training for teachers run by local education authorities.

The third distance education system that is the subject of this thesis, the self-study examination system, will be left until Chapter 8. Its exclusion from the statistics

represents a view of it mostly lying outside normal adult education policy, and it is certainly not confined by some of the constraints of other types of higher education. It will therefore be the seven types of adult education listed above that will be the subject of this chapter. I will now examine the development of policy before considering its impact on the various types of adult education

POLICY STATEMENTS

When considering spare-time education, in the context of China's development strategy, Chambers (1980, p.65) identified four roles: to transmit CCP ideology; to train cadres; to provide a supply of qualified labour, in particular to improve productivity; to substitute for the formal education system, especially to make up for those who lost out during the Cultural Revolution. The first two of these were still the aims identified in his later review of adult education in urban-industrialized China (Chambers, 1984, p.179). Policy in the 1980s has been characterized by a movement away from the earlier concerns for eliminating illiteracy,⁹ to one dominated by the needs of modernization and hence the development of science and technology through workers' education (Hunter & Keehn, 1985, pp.29-30).¹⁰ This led to a rapid rise in adult higher education for diplomas and degrees that the government then sought to curtail, in an effort to stress job-related higher education. In the 1990s, in keeping with the policy changes documented in Chapter 3, there seems to be a move back to a concern for lower level adult education, including that in rural areas.

The importance of adult education to the modernization of China was reflected in the statement of objectives made by the Vice-Minister for adult education, Zang Boping, at the beginning of the 1980s:

- a. to develop the economy by improving productivity;
- b. to enable China to catch up with modern science and technological developments;
- c. to enable cadres who were 'red' to also become 'expert';
- d. to help the transition of socialism to communism (by improving the productive forces and the relations of production together).¹¹

In the 1985 'Decision' on the reform of education a specific decision on adult education was promised and this came in 1987.¹² This latter decision recognized the importance of adult education for modernization and therefore its dual aim of raising the quality of workers and work efficiency, as well as fostering socialist citizens with ideals, morality and knowledge, and discipline. Thus the two aims identified by Chambers (1984, p.171) remain. However, the latter dealing with ideological education seem much less important as the following discussion shows.

The major tasks proposed were:

- a. training for workers etc. who want to change jobs, or who are being re-employed;
- b. provide elementary and secondary education to those employed but who do not have this level;
- c. education or professional training for those who are working but are not up to the requirements of the job;
- d. follow-up training for people with college education to meet needs of a developing society, science and technology (what came to be known as continuing education);
- e. provide social and cultural training for spiritual and cultural needs.

This statement shows some interesting differences from earlier ones, such that of Zang Boping above. First, it is more specific about the education of the workforce, distinguishing short-term training to directly improve ability to do the job ('c') from longer-term continuing education ('d').¹³ Second, 'a' recognizes the role of adult education in the restructuring of industry that government economic policies were encouraging.¹⁴ Third, the role of general education of the population is reasserted ('e'). It also contained a critique of adult education as being divorced from practice (e.g. in industry) and using teaching methods that ignored the needs of adults. Expansion had, as with conventional higher education, led to concerns with quality and the decision introduced more regulation.¹⁵ The government wanted adult education to be more closely linked to the needs of the workplace, something it took up in 1988 with the introduction of a 'professional certificate' (*zhuanye zhengshu*).

Li Peng, in foreshadowing this decision at a national conference in late 1986, spelt out the tasks of adult education, which he said was for people already engaged in industry, agriculture and other kinds of work.¹⁶ To those listed above he added that of providing higher education to make up for the limited capacity of the conventional system. This completely new element that Li Peng introduced was not mentioned in the subsequent State Education Commission 'decision', and involved using adult education as a way of absorbing the excess demand for higher education from school leavers. This reflects earlier calls for adult education to take unemployed school leavers, and is part of the desire to use this sector to satisfy the demand for higher education.¹⁷ As I shall argue later, this requirement is causing worries amongst those in the adult education sector.

Later in 1987 the continuing education task, signalled in the decision earlier in the year, was given added impetus with two sets of regulations. The first, in October, was for 'enterprise continuing education' and focused upon science and technology personnel, including those in management roles. It sought to improve the science and technology in enterprises and hence to improve their economic performance, and was aimed at basic, middle and high-level personnel. In contrast the second set of regulations, issued in December, was for post-higher continuing education. This was aimed at those with diploma qualifications or above. It also covered adult education provided by a variety of institutions and methods, including distance learning.

However, neither of these two sets of regulations was specific in setting up a regulatory system. In 1988 regulations were issued creating the 'professional certificate' (*zhuanye zhengshu*).¹⁸ This was part of the 1987 decision to improve the workforce and focused upon professional-technical and managerial personnel. The qualification was distinguished from both lower level inservice education and diploma and degree qualifications, although it was at higher education level. Those studying for the qualification had to be over 35 years old, have had five years of professional work, and have had senior secondary education. The courses leading to the qualification must by regulation contain 800 hours of "theory education", and seem to last from 1-2 years full-time.¹⁹ Although the qualification had these nationally laid down regulations and hence recognition, detail teaching plans and syllabuses are specified by local or national

professional organizations or government ministries.²⁰ Methods of study for the qualification are not specified this being left up to local areas. The only distance learning system mentioned was the self-study examination system, although this only in the context of approval of specific certificates.²¹

All this was a natural progression in developing adult education more clearly geared to the government's view of the needs of the economy, and away from academic education. To accompany this kind of policy development they had also to tackle the growth that was taking place in adult higher education producing diploma and degree graduates, which by the mid-1980s had expanded enormously. This resulted in problems including those of poor quality education. In an effort to get better control over the system and to improve quality therefore the government introduced an entrance examination to adult higher education. The examination was actually introduced on a trial basis in 1982 along with other entrance regulations (e.g. two years' work experience) for Staff and Workers' Universities, both full-time and spare-time.²² But in 1986 it was introduced fully for all adult higher education.²³ This centrally set examination provided a unified system, parallel to that of the conventional higher education examination, and it included entrance to the RTVU. Since its founding the RTVU had an entrance examination of its own and this was replaced by the unified one.

Thus like conventional higher education, adult education was being subjected to policy changes influenced by a re-assessment of the relationship of education to the economy, as well as a concern for 'quality'. This led government policy to shift towards worker education, with a stress on inservice, continuing and professional education. The result of this policy change will be evident from an examination of the plans for expansion and their achievement in the next section.

THE PLANS AND ACHIEVEMENTS OF ADULT EDUCATION

Here I want to consider the statistical data available on the various types of adult higher education that lead to diploma and degree qualifications, and are therefore directly comparable to conventional higher education. Later I will deal with continuing education and inservice courses. I will also look at the overall contribution of distance learning to adult higher education, although at this stage it will only be a preliminary picture. In Part 2 a clearer picture will be given of the type of contribution that each distance learning system makes to higher education.

Table 4.1: adult higher education statistics for institutions and students (thousands) 1980-1990

<i>Year</i>	<i>Institutions</i>	<i>Admissions</i>	<i>Enrolment</i>	<i>Graduates</i>
1980	2682	204	497	104
1981	1525	95	562	94
1982	1147	274	662	227
1983	1196	417	926	136
1984	1157	475	1293	164
1985	1216	788	1725	347
1986	1420	564	1856	450
1987	1399	515 ²⁴	1988	481
1988	1373	698	1728	754
1989	n.a.	450 ²⁵	1240	n.a.
1990	1321	492	1666	486

Sources: 1980-1985 Department of Planning, SEC, (1986, p.94); 1986 *Guan* (1989, pp.754-5); *ZGJYB*, No.461, 27 October 1987, p.3, *ZGJYB*, No.450, 1 October 1987, p.1; 1987 *ZGJYB*, No.490, 2 January 1988, p.1, *ZGJYB*, No.643, 31 December 1988, pp.1-2; 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.90-1); 1989 *SWB FE/0357 B2/6*, 13 January 1989, *SWB FE/0401/C1/4-6*, 6 March 1989; 1990 *ZGJYB*, No.991, 19 March 1991, p.2.

There have been dramatic changes in the number of students enrolled over the 1980s, as Table 4.1 (above) indicates. Like conventional higher education the growth of the early part of the decade was replaced by decline at the end of it. The admission figures show a decrease starting around 1986 when the unified entrance examination for adult higher

education was introduced nationally. This, as indicated earlier, was part of government policy to reduce the excessive expansion of higher education, and to improve its quality. Some argue that there was a lack of suitable candidates who can pass the entrance examination, but as I shall show this seems unlikely. To illustrate how government policy operated I will consider the growth against the plans, the effect of the introduction of the examination, and the longer-term predictions that reflect the government's revised view of the relationship between the economy and education.

It is not possible to consider adult higher education growth against the Sixth Five-Year Plan (it did not contain any planned figure for adult higher education graduates), as was possible for conventional higher education (Table 3.4). I have therefore used the 1983-87 growth plans for admissions and enrolments and the Seventh Five-Year Plan for graduations (see Table 4.2 below).

Table 4.2: comparisons of adult higher education plans and actual achievements (thousands) 1982-90

<i>Year</i>	<i>Admissions</i>		<i>Enrolment</i>		<i>Graduates (cumulative)</i>	
	<i>Plan</i>	<i>Actual</i>	<i>Plan</i>	<i>Actual</i>	<i>Plan</i>	<i>Actual</i>
1987	1100	515	2270	1988	-	1578
1990	- ²⁶	400	-	1666	2100	2568

Sources: Actual figures Table 4.1. Plans 1987 *State Council Bulletin*, No.11, June 1983; 1990 SWB FE/8235/C1/23-4, 17 April 1986.

The ambitious plans for the 1982-87 period were never fulfilled, even in the peak years for admissions (1985) and enrolment (1987), because of a change in policy.²⁷ Neither did the achievement in the period of the Seventh Five-Year Plan exceed these earlier targets, underlining the change in policy that had taken place. The actual figures for graduates exceeded those expected in the Seventh Five-Year Plan, indicating the problem faced by the government. The worries were not just that too many graduates were being produced, but that there was a potential problem of their quality, that a reduction in growth could improve.²⁸ The fall in the number of institutions from 1986 shows a determination to

eliminate poor quality institutions, using the process of approval and registration of the 1987 'decision'²⁹

Given this interest in quality it is possible to see the introduction of the entrance examination as an attempt to cut the intake and improve the quality of *students*. The aim of the examination is not to select, and hence control intake, but to allow people to enter who have achieved the correct standard to study at higher education level.³⁰ However, the 1991 examination pass mark was raised to reduce the intake.³¹ Table 4.3 looks at the numbers sitting the entrance examination, the numbers being admitted and the ratio this represents. The conclusion from Table 4.3 is that admission quotas are controlling entry, with ratios getting worse as quotas decrease.

Table 4.3: admission ratios (%) for adult higher education entrance examination (numbers in thousands)

<i>Year</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>
<i>Examination candidates</i>	600	950 ³²	1300	450	1150 ³³	1449
<i>Admissions</i>	564	515	698	n.a.	429	400 ³⁴
<i>Admission ratio (%)</i>	94	29	54	n.a.	37	32

Sources: All admission figures are from Table 4.1. Numbers sitting examination: 1986 ZGJYB, No.342, 17 January 1987, p.2; 1988 ZGJYB, No.560, 21 June 1988, p.1; 1989 ZGJYB, No.716, 27 June 1989, p.2; 1991 ZGJYB, No.1044, 20 June 1991, p.1.

Jiang (1989, p.8) predicts a fall in admissions into the next decade, falling to 350,000 in 1992, and remaining at that level (he also makes a lower estimate of 300,000). *Zhang* (1989, p.31) argues that there is in effect a declining pool of entrants to the unified examination, with the majority having sat the examination three or four times without success. This majority do not want to try any more. However, the figures for examination entrants given in Table 4.3 do not bear this out, indicating a relatively steady (perhaps even increasing) number taking the examination.³⁵

As with conventional higher education, adult education is set to decline. Zhou Beilong, the State Education Commission official quoted in Chapter 3 in connection with using other developing countries as models for appropriate levels of higher education, called for

a gradual reduction in adult higher education.³⁶ *Jiang's* (1989, p.8) high and low estimates of the relative sizes of the outputs (in millions) of the two sectors in the years 1991-2000 give a clue to what Chinese commentators think might be the future situation, and these are given in Table 4.4. Unfortunately he gives no justification for the rates of increase and decrease he assumes for conventional and adult higher education respectively.

Table 4.4: high and low estimates (thousands) of higher education in the years 1991-2000

<i>Graduates</i>	<i>Low estimate</i>	<i>High estimate</i>
Adult higher education	336	378
Conventional higher education	749	780

Source: *Jiang* (1989, p.8).

These figures represent a fall for adult education and a rise for conventional higher education compared with current output (see Tables 3.4 & 4.1), that cannot therefore reflect a view based only on a growth in the economy. This seems rather to point to the changing role of adult higher education that can be illustrated by looking at the changes within the sector. The global figures hide changes of relative size that are taking place among the various providers of adult education. These have great significance in showing the move to inservice and continuing education. Table 4.5 (overleaf) gives the numbers for each type of institution, except the RTVU.³⁷ This table shows an initial decline in numbers of institutions until 1983, particularly for Staff and Workers' universities, education colleges and peasant universities, as part of the post-Cultural Revolution drive to improve quality and to close down those institutions which were schools rather than universities. The main growth has been in the correspondence and evening colleges run by conventional universities and in the more recently established (1983) administrative cadre training institutions. The enrolments, after 1983, for the various types of institutions emphasises this greater growth, as Table 4.6 (overleaf) illustrates.³⁸

Table 4.5: number of various adult higher education institutions, for selected years 1980-90³⁹

<i>Type of institution</i>	<i>1980</i>	<i>1983</i>	<i>1987</i>	<i>1988</i>	<i>1990</i>
Staff & workers' universities	1194	841	915	888	835
Peasant universities	165	4	5	5	5
Independent					
correspondence colleges	4	5	5	4	n.a.
Education colleges	1290	304	268	265	265
Regular universities' corresp.					
depts. & evening univer.	93	378	600	n.a.	634
Administrative cadre training					
institutions	-	15	168	171	172

Source: 1980 and 1983 figures are taken from Department of Planning, SEC (1986, p.94); 1987 from ZGJYB, No.490, 2 January 1988, p.1; 1988 *Gujia jiaoyu weiyuanhui jihua jianshisi* (1989, p.90); 1990 from ZGJYB, No.991, 19 March 1991, p.2.

Table 4.6: enrolments (thousands) by type of adult higher education institution

<i>Type of institution</i>	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1988</i>	<i>1990</i>
Staff and workers'					
university	68.5	260	341	288	230
Peasant universities	15.3	0.9	n.a. ⁴⁰	0.7	0.4
Independent					
correspondence colleges	14.9	9.9	n.a.	12.1	16
Education colleges	42.1	247	260	276	253
Regular universities'					
correspondence divisions					
& evening colleges	189	493	595	635	693
Administrative cadre					
training colleges	-	40	56	62	54
Radio & TV Universities	168	674	604	454	314

Sources: 1980 and 1985 Department of Planning, SEC (1986, p.95); 1986 *Guan* (1989, p.754-5); 1988 *Gujia jiaoyu weiyuanhui jihua jianshisi* (1989, p.90-1); 1990 ZGJYB, No.991, 19 March 1991, p.2.

It may be that growth in the role of the correspondence and evening universities run by conventional universities reflects the concern for quality, which may be better assured by conventional institutions than by institutions run by enterprises, for example.⁴¹ Table 4.6 (above) also shows the dramatic drop in enrolment of the RTVU over the second half of the decade, accounting for almost all of the 300,000 drop in total enrolments from 1987 (the peak year) to 1990 (see Table 4.1). The significance of this in terms of the shift from diploma courses to inservice and continuing education will be evident when I consider the RTVU in Chapter 6, where I will show that its existence as a university-level system may be at stake.

These data show a change in policy to move away from diploma education, reflecting a changed view of the quantitative needs of the economy, a view about quality in this sector, and a change in the role of distance education. The policy changed instead to emphasise inservice and continuing education, with different results in each of the distance learning systems. But in spite of this change the adult education sector is making a considerable contribution to the needs of the country and to satisfying the demand for higher education, issues to which I now turn.

NEEDS OF THE ECONOMY

The contribution that adult education makes to the needs of the economy can be looked at in the same way as for conventional education, namely in terms of the global contribution to graduate output, the level of graduates (diploma or degree), and the specialisms that are offered. Below I consider each of these. Global data on specialisms are rarely reported for adult education, in contrast to conventional higher education,⁴² and so I will return to this aspect in Part 2.

There are two ways that adult higher education contributes to the economy. First it provides a better trained workforce that can take on new jobs. Second it can improve the knowledge and skills of those doing particular jobs. The first way is the function of the diploma programme, but its success depends upon graduates getting jobs appropriate to their qualifications (in conventional higher education through job allocation). The second

way does not require a change of job and leads to inservice, continuing and professional education programmes.

Total output of graduates

First, then the contribution to total graduate output. Table 4.7 compares the conventional and adult sectors, to reveal the relative contributions.

Table 4.7: comparison of overall graduation figures (thousands) for adult higher education and conventional higher education

<i>Year</i>	<i>Adult Higher Education</i>	<i>Conventional Higher Education</i>	<i>Total</i>
1980	104	147	251
1981	94	140	234
1982	227	457	684
1983	136	335	471
1984	164	287	451
1985	347	316	663
1986	450	308	758
1987	481	532	1013
1988	754	553	1307
1989	n.a.	619	n.a.
1990	486	614	1100

Sources: Tables 3.3 & 4.1

The adult higher education sector grew to the extent that it exceeded the conventional sector by 36% (1988), but it had reduced to 80% of it by the end of the decade. As I showed earlier (Table 4.4), conventional higher education is predicted to continue to grow, but adult higher education to decline. Thus, as long as the government saw the need for expansion of higher education, adult education responded faster than the conventional system. The government is therefore intent upon changing the role of adult education away from that of traditional qualification providers. However, given the

differences of growth within adult education and in particular the dramatic changes in distance learning within it, a closer examination of total graduate output is necessary. Table 4.8 shows a comparison of distance learning with adult education in general and conventional higher education, including only those distance learning systems reported by the government. The major one missing is the self-study examination system. Chapter 8 will look again at the total contribution of distance learning including this system.

Table 4.8: distance education graduations (thousands) compared to graduations from all sectors of higher education 1980-1990

<i>Year</i>	<i>Conventional</i>	<i>Total Adult</i>	<i>RTVU</i>	<i>CE</i>	<i>Total DL</i>	
					<i>(No)</i>	<i>(%)</i>
1980	147	104	0	15	15	14
1981	140	94	0	5	5	5
1982	457	227	92	51	143	63
1983	335	136	68	14	82	60
1984	287	164	17	43	60	36
1985	316	347	165	51	216	62
1986	308	450	249	54	303	67
1987	532	481	179	77	256	53
1988	553	754	275	165	440	58
1989	619	n.a.	94	n.a.	n.a.	n.a.
1990	614	486	81	117	198	41

Sources: Total adult and conventional higher education - Table 4.7. RTVU - CRTVU (undated); Hawkrige (1990, Table 5.1E); ZGJYB, No. 991, 19 March 1991, p.2. Correspondence education 1980-85 - Department of Planning, SEC (1986, pp.94-9); 1986 - Guan (1989, pp.754-5); 1987 - Guan (198, p.764-5); 1988 - Guojia jiaoyu weiyuanhui jihua jianshisi (1989, p.90-1), ZGJYB, No.798, 4 January 1990, p.3; 1990 - ZGJYB, No. 991, 19 March 1991, p.2, ZGJYB, No.1005, 13 April, 1991, p.3.

For most of the decade distance education was the main provider of adult graduates, and this was largely because of the effect of the RTVU. There have been considerable fluctuations in the RTVU output, which, as I will show in Chapter 6, reflects the introduction of new programmes in response to the change in policy. The decline in proportion of distance education graduates in the second half of the decade cannot be

explained only by the decline of the RTVU, and must reflect the government policy to reduce all adult education. But it is evident from Table 4.8 that correspondence education is not reducing its output to the same extent. The growth in enrolment shown in Table 4.6 should in theory lead to an eventual continuation of growth in future years. As I will show in Chapter 7, this indicates a preference for correspondence education on the part of the government, based upon its association with conventional higher education. This association gives it the kind of quality approved by the government.

Output of diploma graduates

In Chapter 3 I explored the needs of the economy for diploma graduates and concluded that there was much to do for conventional education to reach the kinds of ratios estimated for the economy. *Shang* (1989, p.12), a State Education Commission official, said that adult higher education should take on the task of training mid-level specialists (*zhuanmen rencai*). *Zhou* (1989, p.142) considers the role of the adult education sector in aiding the expansion of diploma graduates, and concludes that it cannot be relied upon to rectify the imbalance of degree qualifications. However, he does so on the basis of two-years' statistics (1984 & 1985) and concludes that adult higher education cannot be relied upon because of fluctuations. Had he picked 1987 and 1988 he may well have come to different conclusions on the basis of "fluctuations". The changes in the years he deals with are related to internal factors of the RTVU, as I will show in Chapter 6, that do not continue and are not representative of general trends. There is, however, a problem with the reporting of statistics because they do not always distinguish diploma and degree graduates for adult education. In Part 2 I will be able to explore in detail the output from the various distance learning systems in an effort to determine this, but for the moment I will rely upon three years to look at the *ratio* of diplomas and degrees for the various sectors of adult education. Table 4.9 (overleaf) shows such information for 1986 to 1988.

Table 4.9: degree and diploma graduates (thousands) for all adult higher education in 1986-1988

	1986			1987			1988		
	Total	Diploma No	%	Total	Diploma No	%	Total	Diploma No	%
<i>Type of institution</i>									
S & W Universities	49	48	98	77	76	99	135	134	99
Peasant Universities	0.5	0.5	100	0.6	0.6	100	0.7	0.7	100
Independent CE colleges	1	0	0	1.4	0	0	15	14	93
Education colleges	67	62	92	88	81	91	101	92	91
CU CE	54	35	65	76	48	63	150	119	79
CU EU	17	12	71	30	25	83	51	42	82
Administrative cadre training institutions	13	13	100	29	29	100	26	26	100
RTVU	249	249	100	179	179	100	275	275	100
TOTAL	450	419	93	481	438	91	754	703	93

Sources: 1986 & 1987 *Guan* (1989, pp.754-55, 764-5); 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.90-1)

Key: S & W Universities - Staff and Workers' Universities
 Independent CE Colleges - Independent correspondence colleges
 CU CE - conventional universities' correspondence depts.
 CU EU - conventional universities' evening universities
 RTVU - Radio & Television Universities

Unfortunately such data do not exist for other years in the 1980s, and so only estimates of the effect of adult education on the diploma and degree ratio can be given for them. Table 4.10 adds to Table 3.8 by showing the effect on the ratio of degrees and diplomas of adding the adult higher education sector, *assuming the ratio of 93% diplomas* derived from Table 4.9. It is evident then that adult education makes a major contribution to correcting the output of diploma graduates, to the extent of exceeding some of estimates of the level required for the economy given in Chapter 3.⁴³

Table 4.10: ratio of degree and diploma graduates from adult and conventional higher education

<i>Year</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1990</i>
<i>Diploma CHE</i>	139	89	83	83	114	[111]	[247]	274	[301]
<i>Total AHE</i>	94	227	136	164	347	450	481	754	486
Diploma AHE [87]		[211]	[126]	[152]	[323]	419	438	703	[476]
<i>Total graduates</i>	234	684	471	451	663	758	1013	1307	1100
Total diploma									
(No.)	226	300	209	235	437	529	685	985	777
(%)	97	44	44	52	66	70	68	75	71

Sources: Tables 3.8, 4.7

Key: CHE Conventional higher education; AHE adult higher education. Figures in parentheses calculated from assumed fixed ratios, except for 1987, where linear change 1986-88 assumed.

The government policy of cutting back on adult higher education, while maintaining the level of conventional education, is having an adverse effect on this ratio, and requires diploma graduation in the conventional sector to increase to reverse this effect. The development of the polytechnics will of course serve this function, but it is too early to evaluate the development of them.⁴⁴ But the overall view of adult education must be that it has made a substantial contribution to the economy in both total output and kind of graduates necessary, and that most of this can be attributed to the effect of the distance education systems.

Correcting the balance of specialisms

In Chapter 3 (p.46) I indicated that adult higher education could contribute to correcting the imbalance of specialisms, and here I want to look at the current balance for adult education in general.⁴⁵ Table 4.11 shows the total numbers and percentage of graduates in each field of study (i.e. group of specialisms) and a comparison with that already given for conventional higher education. This table shows that, for those areas where expansion is needed (management, law, and finance and economics), adult education has a much higher proportion of graduates. Conversely, where a reduction is needed (engineering and medicine), adult education has a much lower proportion of graduates than the conventional sector. This indicates that adult education as a whole is contributing to those areas where Chinese commentators, at least, think the economy has need of more graduates. As will become evident in Part 2, distance learning systems have different proportions of input to the various fields of study.

Table 4.11: comparison of proportions of fields of study of adult and conventional higher education

<i>Field of study</i>	<i>Total adult education</i>	<i>AE % of total</i>	<i>CHE % of total</i>
	<i>(thousands)</i>		
Engineering	88,741	12	31
Agriculture	6,997	1	5
Forestry	2,049	0.3	1
Medicine	11,366	1.5	7
Teacher training	193,603	26	32
Literature	182,576	24	6
Science	6,118	1	5
Finance	172,167	23	9
Government & Law	85,825	11	2
Physical Education	2,371	0.3	1
Art	2,031	0.3	0.7

Source: *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.30-31, 32-3, 92-3)

'Job assignment' for adult graduates

Graduates with the correct level of qualification and specialism can only be seen as suiting the economy if they are used effectively after graduation. Graduates from the conventional system are usually allocated to jobs, and the problems in allocation, and in the planning that leads to matching admissions and allocation, are very great. It was these problems that in part led the government to cut back on higher education. In contrast adult graduates are not allocated jobs (hence the inverted commas in the title of this subsection). Most adult students are in employment (even if they study full-time)⁴⁶ and so they return to their work units on completing their degrees or diplomas. This means that three aspects are important in determining how effectively they are used: who decides whether and what a student studies; promotion prospects within the work unit; or the possibility of job mobility. Thus it is more a matter of 'job re-assignment'.

Who decides on study depends to some extent on the kind of adult education being undertaken, but by and large a student has to get permission from his or her employer before taking up study. There has been a long-running problem of trying to get factory managers to put sufficient emphasis on adult education in the face of what they see as more important production needs (Chambers, 1980, Chapter 5), and this problem persists today (Dong, 1989, p.5). A co-ordinating committee was set up in 1986 with the State Education Commission and 14 other ministries to counter this problem, but this kind of co-ordination can not reach down to the level of enterprises.

Most adult institutions insist that specialisms match students' work, and if employers pay for their workers to study it is likely they will only do so if the specialisms are appropriate to the enterprise, but that is not always the case.⁴⁷ If the enterprise runs the college then the guarantee of this compatibility is stronger (Dong, 1989, p.6).⁴⁸ There are certainly no persistent reports about students' education not being in the correct subject.⁴⁹ Two factors indicate that all is not well with the match of specialisms and students' work, however. First, the fact that some adult colleges are so small that they can only offer one or two specialisms; they cannot offer the range to suit the needs of an enterprise (Shang, 1989, p.10). Second, for adult education which is geared towards certificates (*xueli jiaoyu*), there is the danger that students are only concerned about getting a certificate, which may

in turn lead to them studying any subject for which there is a place.⁵⁰ Nevertheless if a graduate returns to his or her unit and is not promoted to a job suitable to his or her degree, then dissatisfaction will occur.⁵¹ Such dissatisfaction is apparent because there are vague references to the need to reform the labour market, presumably to allow job mobility (*Dong*, 1989, p.5), and I will consider such evidence in Part 2. The tradition of graduate allocation in the conventional sector, and salaries related to graduate status, leads to expectations on the part of students.

The reluctance of employers and the dissatisfaction that results is inevitable where promotion must take place within the unit. Students will be pressing to increase their educational level, irrespective of the capacity of the company to absorb higher-level personnel. This is more of a problem in smaller enterprises, who have less flexibility in this regard. Employers and potential students may anticipate these problems, and this may explain employers' reluctance to approve study and students' to come forward. The evidence of Table 4.3 does not, however, show any lack of demand from potential students, although there is evidence in some of the distance education systems of a problem (see Part 2).

Some of these problems could be overcome if there was job mobility, as *Dong* (1989, p.5) suggests, because it would allow new graduates to seek jobs elsewhere commensurate with their educational level. In the mid-1980s I documented efforts on advertising jobs, a national talent exchange network, a job transfer office and other such measures to improve job mobility (McCormick, 1986, p.83). By the end of the decade the intentions still seem to be there but with little progress. At a personnel mobility conference in May 1989 it was reported that 30% of specialized employees wanted to change jobs, but only 2.6% were able to move to suitable jobs.⁵² The call was for a job application procedure, rather than just state assignment, and a service network to select the right people for jobs. More recently reform of the labour system has been promised for the 1990s,⁵³ and the Eighth Five-Year Plan laid out new employment policies.⁵⁴ Such policies and systems are seeking to balance the needs of the state to control the job market (and ensure for example

that rural enterprises get qualified workers) with the needs of both enterprises and individuals.

Inservice and continuing education

Inservice training (*gangwei zhiwu peixun*) and continuing education (*jixu jiaoyu*) courses are more varied than diploma and degree programmes. Courses are offered at a variety of levels, they can last from a few weeks to several months, and they can be organized by a number of agencies, including professional bodies.⁵⁵ Their full extent becomes difficult to determine because they merge into the certificated programme at one end (e.g. teacher inservice) and into general informal education at the other (e.g. occasional seminars). Given the policy statements analysed earlier, it is evident that this sector is now very important, particularly in relation to science and technology personnel. The targets for inservice and continuing education are as vague as those for improving the formal educational qualifications of the workforce. This is not surprising as the nature of the educational experiences is so varied. Thus Yuan Baohua, the then head of the Workers' Education Commission, gave one of the five-year goals in 1981 as: providing inservice education for all workers, i.e. 90 million to go through short-term training, in rotation (Hunter & Keehn, 1985, p.31). This was included in the 'Decision on strengthening work on employee education' published jointly by the CCP Central Committee and the State Council, along with the objective of giving university graduates the chance to acquire knowledge of modern science, technology and management techniques (Chambers, 1984, p.182). Zhang, X.H. (1988) estimates that in 1985 there were about 3.5 million science and technology workers with a college education, and that 10% (0.3 million) could get some form of continuing engineering education (*jixu gongcheng jiaoyu*). He also said that the Seventh Five-Year Plan (1986-1990) aimed to establish a system of continuing education for science and technology personnel. The 1987 regulations on continuing education are presumably the foundations of that system. Although it is true to say that continuing education of a post-higher education level is carried out by conventional universities, most inservice and continuing education takes part in adult education.⁵⁶

Reports of the provision of inservice and continuing education are usually either of particular plants or municipalities, and hence it is difficult to get any national picture of the scope and scale of provision. The only national picture for more specific kinds of training is given for 1986 and 1988 in Table 4.12.⁵⁷ This table shows the growth of this sector, confirming the earlier conclusion about the growing importance of it for adult education in general, and showing the particularly important role of the RTVU. It reinforces the work-oriented nature of adult education. However, the variations in the kinds of courses make conclusions very difficult.⁵⁸

Table 4.12: numbers (thousands) completing continuing education, short term and other courses in 1986 and 1988

<i>Institution</i>	<i>Continuing education</i>		<i>Short-term</i>		<i>Other</i>	
	<i>1986</i>	<i>1988</i>	<i>1986</i>	<i>1988</i>	<i>1986</i>	<i>1988</i>
RTVU	12	29	88	315	53	90
Staff & Workers	6	12	43	66	29	22
Peasant University	0	0	0	0	0	0
Cadre College	4	5	30	65	5	4
Education College	2	5	15	22	14	21

Sources: 1986 *Guan* (1989, p756-7); 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.94-5)

There are no national statistics of the 'professional certificate' courses for adult education in general. Thus in Part 2 I will consider the role of the distance education systems in this area of provision, particularly the RTVU, where I can consider the statistics in context.

DEMAND FOR ADULT HIGHER EDUCATION

There are two sources of demand for adult higher education: from adults who missed the opportunity or who were not ready for higher education; from current school leavers who cannot get into conventional colleges and universities. Table 4.3 showed large numbers of adults, from half to one million, being turned away from higher education having sat the entrance examination. Furthermore the admission ratio is getting worse and hence chances of entry are reducing. Although there is a large unsatisfied demand, the

government has reduced intake, as I have argued, in part to improve quality and in part to try and shift the emphasis to professionally oriented higher education. Added to the demand from adults is the huge number of school leavers who each year fail to get in to conventional higher education. Table 3.9 showed that only 20% of those who sit the examination get a place,⁵⁹ and despite the government's intention to encourage them to go to technical vocational education, they continue to show an interest in higher education. Some 2.5 million were rejected in 1991 and over 2 million in each of the preceding two years.

This situation existed earlier in the decade and led the State Education Commission to allow school leavers to enter directly into adult higher education institutions.⁶⁰ 1985 was apparently the first year school graduates were officially offered courses in the higher education sector,⁶¹ although the numbers reported are low, and have remained so, as Table 4.13 shows.

Table 4.13: admissions (thousands) of school leavers into adult higher education

<i>Year</i>	<i>1985</i>	<i>1987</i>	<i>1988</i>	<i>1990</i>
	37.8	39.6 ⁶²	54 ⁶³	28

Sources: 1985 PRC Year Book Editorial Department (1987, p.458); 1987 *Guan* (1989, p.764-5); 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.90); 1990 *ZGJYB*, No.991, 19 March 1991, p.2.

Most of these school leavers go to the RTVU and correspondence education and as early as 1983 the Ministry of Education was encouraging the RTVU to take more 'unemployed' school leavers.⁶⁴ However, policy has now changed and the 1989 State Education Commission tasks included controlling the number of school leavers going to adult higher education.⁶⁵ In 1990 only 6% of admissions and enrolment, and 9% of graduates were from school leavers who had gone directly into adult higher education.⁶⁶ So school leavers do not represent a large proportion of adult higher education, nor do the numbers taken in have any significant impact on the huge number who do not get into the conventional system.⁶⁷ Again cut backs in admissions to adult higher education only exacerbate the problem for school leavers. This is a matter of government policy, as I

have said before, and is related to job assignment problems. As most of the school leavers go into distance education systems I will consider their job assignment further in Part 2.

ISSUES IN ADULT HIGHER EDUCATION

Quality

The concern for quality remains at the end of the decade as it was at the beginning. In Part 2 I will consider quality of the distance education systems, and so here I will confine myself to the face-to-face adult institutions. The reduction in the number of institutions with steady (actually slightly increasing) enrolment from 1986 to 1987 is seen as a positive sign in improving the quality (*Shang*, 1989, p.10). Small institutions tend to have poor facilities (e.g. equipment and libraries), and can only offer a restricted number of specialities, which match poorly the needs of enterprises (*Yi, Xu & Yang*, 1989, p.25). This problem persists and recently Wang Mingda, a State Education Commission Vice-Minister, called for more combining of small adult education colleges.⁸⁸ Using the 1990 figures in Tables 4.5 & 4.6 for the face-to-face colleges gives average sizes of less than 300, for all except education colleges (at 950), with peasant universities having an average size of 80!

The pursuit of quality has had a more profound effect on the adult education system; it has pushed it into becoming more **formalized**. This was noted by the International Council for Adult Education in its various missions in the early 1980s (Hunter & Keehn, 1985, pp.4-5; Duke, 1984, p.48; Colletta, 1981, p.16-17). Hunter & Keehn (1985, pp.66-73) saw three aspects of formalization:

- a. accreditation, through government approval of institutions;
- b. standardization, through admission and qualification completion requirements;
- c. recognition of qualifications in the same way as corresponding ones in the conventional system (e.g. salary entitlements).

In China the term used to describe formalization is rather awkwardly translated as 'regularization' [of education] (*pujiaohua*), and its impact on adult educators remains a topic of debate in adult education journals.⁸⁹ The concern is with whether or not adult

education (particularly higher education) has a separate existence and unique characteristics, and the effect on it of becoming like the conventional system. The respects in which it appears like the conventional system are: it follows the same levels and standards of qualifications (e.g. diploma and degree courses); has the same content, and in particular stresses theory in a similar way; is largely based on full-time study; seeks to use full-time teachers; uses an entrance examination.⁷⁰ The desire to emulate the conventional system will in part reflect a desire to contribute to the educational needs of the country, but also in part to counter the perception of lower status which adult education suffers from.⁷¹ Commentators worry that by trying to be like the conventional system the characteristics of adult education, that are its strength, will be lost. In particular they lament the possible loss of: its objective of trying to provide a more vocational (professional) education; and consequently the reduction in the practical orientation of study; the strong and personal objectives of adults related to their immediate circumstances; flexibility of study suited to people who work; openness of entry.

There do not appear to have been any detailed empirical studies on this problem, but 'regularization' is obviously of great concern to those within adult education. In a talk at the opening of a national conference of staff of some Staff and Workers' Universities, Dong Mingchuan the director of the State Education Commission's third office of higher education, although giving an optimistic view of adult education, passed on a message from Li Tieying which asked the audience not to feel discouraged (*Dong*, 1989, p.7). It may be that those in Staff and Workers' Universities feel the most threatened because they have suffered most in the reductions (apart from Peasant Universities), and, since they are full-time face-to-face institutions, are competing directly with conventional institutions.⁷²

The relationship between work and education

Adult education graduates are well known for: working hard, suffering hardships; being good at thinking (not just memory);⁷³ being willing to do practical work and not putting on airs and graces.⁷⁴ One of the reasons adults are seen to have the advantage of being more practical and suited to the needs of the enterprises is that they are already employed in them. The learning can in principle relate more closely to the workplace, though this is to

some extent dependent upon who runs the college, with those run by enterprises being in the best position. Two international studies of adult education have praised China in respect of the relationship between work and education (Hunter & Keehn, 1985, pp.40-43; Kerr *et al*, 1978, pp.23, 29), giving examples of concrete links being made.⁷⁵ As I have shown in Chapter 2 the ideas on the relationship of work to education have moved towards emphasising intellectual objectives. If adult education tries to emulate the conventional sector, and as expansion takes place in institutions run by central and local education authorities rather than enterprises, so this advantage will deteriorate.⁷⁶ The fact that full-time study is reducing does, however, improve the situation.

Again we have the situation of the government cutting back on a form of higher education that has the very qualities that it wants of conventional higher education. There is no need to try and instill in adult students an awareness of the needs of China in general or those of industry in particular. Such students are only too well aware of these needs from their experience of work. However, the extent to which there is any real connection between what is studied and their working situations is not so clear. As in the conventional sector teachers are often divorced from the realities of industry, and new ones taken from the ranks of young graduates (Wu, 1989, p.14). One way round this is to use part-time teachers taken from enterprises, and they made up about half of teachers in adult higher education in the mid-1980s (Department of Planning, SEC, 1986, pp.98-9), but by 1988 this had reduced to under a quarter.⁷⁷ This indicates a deterioration in the potential of staff to bridge the gap of work and study.

For distance learning systems, as a form of adult education, the relationship of work and education is potentially close, and in Part 2 I will explore the realities of it for each of the systems.

CONCLUSION

This chapter has shown how adult higher education has responded to government calls for expansion to meet the needs of the economy. In particular it added considerably to the graduate output, and more importantly to the much needed diploma-level graduates. The

change in government policy away from academic qualifications of degrees and diplomas resulted in a drop in intake to adult higher education, aided by the use of an entrance examination system. This, along with closer control of institutions, allowed the government to reduce numbers and, it hoped, improve the quality of intake and provision. Not surprisingly this decreased the chances of getting into higher education, especially for adults. It had almost no impact on the chances of school leavers getting in, because the numbers going into the adult sector never reached a large proportion of intake, even when the government was encouraging it. In keeping with trying to discourage secondary school leavers from seeking places in higher education, and to go instead into technical vocational education, the beginning of the 1990s saw a reduction in school leavers entering adult education. The change in policy makes claims by Robinson (1991), that adult higher education was a success story for access to education among poor performances by the government, look over optimistic. She particularly points out distance learning in the form of the RTVU as a indicator of this success. The idea of access is seen as important by such observers, as it is by those who advocate distance learning, as the next chapter will show.

The shift in emphasis away from degrees and diplomas to inservice and continuing education was part of the effort to relate education more closely to the needs of the economy. This reflected the government's changed view of the relationship of education and the economy in terms of both needing to move away from expensive and ineffective investment in higher education, and keeping spending more in line with economic growth. However, it contained some contradictions. It is evident that adult education suffers less from the criticisms of being practical and of being divorced from the realities of China, a criticism of conventional graduates. This would remain true even if the courses were identical to conventional institutions, a real issue for Staff and Workers' colleges. Adult higher education should be more attractive to the government because of several factors: the more positive views of employers of adult graduates; the fact that they have diplomas rather than degrees; their practical experience and the fact that they return to their original workplaces. Ironically the government is cutting back on adult higher education and increasing conventional, albeit modestly. This policy is to improve 'quality' and to

change the emphasis to inservice and continuing education. The 'quality' they will obtain is likely to be that of better academic achievement, which is at odds with the objectives behind promoting inservice and continuing education.

The impact on distance education, as the largest sector of adult higher education, has been substantial, although not uniform across the various systems. The RTVU has suffered greatly in terms of the decline of diploma provision, but correspondence education has increased. This compounds the irony noted above because, as I will show in Part 2, correspondence education is more like conventional higher education, and the RTVU more suited to the needs of the economy. But the distance education systems reported in the official statistics omit an important system, namely, the self-study examination system. This is quite different from the other systems and has important implications for the supply of graduates to the economy, for satisfying demand, and perhaps for changing the burden of funding of higher education. In Chapter 8 I will therefore return to looking at the total impact of distance learning by considering all the major systems (correspondence education, RTVU *and* self-study).⁷⁸

The findings of this chapter illustrate the importance of seeing the development of distance learning within the context of the development of policy and practice of education as a whole. The situation that Chambers (1980) found in his study of adult education from 1949 to 1980 still exists today, namely that it is continually subjected to changes of policy, even although the major objectives remain mostly the same. He, however, was talking about *ideological* policy, whereas in the post-1980 period it is views about the relationship of education to the economy that have been changing. Nevertheless the changes have had a profound impact on adult education in general and distance learning in particular.

But the policy and practice context discussed in Chapters 3 and 4 is not the only one to consider. Distance education has its own imperatives and, on an international level, its own rationale. The next chapter takes up this context by looking at distance learning in more general terms.

NOTES

1. Swanson & Zhang (1987) say that the World Bank see it as the best and most comprehensive in the world. The World Bank's (1983, p.176) assessment is that it is "well established and efficient". This kind of recognition has resulted in several International Council for Adult Education (ICAE) missions to China (Cousineau *et al*, 1983; Hunter & Keehn, 1985) and an international conference on adult education in Shanghai (Duke, 1987).
2. The major studies in recent years are Chambers (1980; 1984), Colletta (1981), and Hunter & Keehn (1985). Ogg (1988) considers the relationship of science, technology and adult education, but it is mainly an account of the views of various people interviewed in China, with no analysis. Deaux (1988) looks specifically at Tianjin, but focuses entirely upon the Staff and Workers' Universities, which, I will show, represent a small part of adult higher education.
3. This kind of classification was also used by SEC officials in describing the special characteristics of China's adult higher education (Yi, Xu & Yang, 1989, pp.23-24)
4. Communes were also responsible for adult education until their demise in recent years (*China Daily*, 9 May, 1983).
5. See Lo (1982) for an account of such activities from 1936-1982.
6. Colletta (1981) uses the term 'worker-peasant education' in the title of his study of adult education.
7. Indeed the regular universities and polytechnics, discussed in Chapter 3, take adults on contract from enterprises to complete conventional degree and diploma programmes.
8. A good description of all the various forms is given in *FBIS JPRS-CPS-86-024*, p.45, 11 March 1987.
9. See Lo (1982) and Chambers, (1980, Chapters 6 & 7), for accounts of earlier literacy programmes.
10. This included the education of agricultural workers, but to a lesser extent, although very recently rural adult education has been given a boost.
11. Quoted in Chambers (1980, Chapter 8), from a *HongQi* article by Zang Boping. Hunter & Keehn (1985, p.31) in quoting from Zang Boping (but giving no source) show a more specific emphasis on worker and peasant education: to augment and renew the scientific and technical knowledge of the workforce; adult education as a major avenue for the training of specialists in trades and industry (e.g. engineers and technicians). They also mention the building up of the cultural level of workers and peasants necessary for a highly socialist cultural civilization.
12. The original 1985 'Decision' was reported in *SWB FE/7966/BII/1-10*, 9 June 1985. The decision of the State Education Commission on reforming and developing adult education was reported in *SWB FE/8621/BII/1*, 16 July 1987. The complete regulations are given in *Guan* (1989, pp.41-7).
13. It also conforms to the international trend of emphasising worker education (Schutze, 1987).
14. For example, the closing down of inefficient enterprises, and the reduction of overstaffing. I will deal with the connection between the employment system and adult education when I consider job allocation etc. later in the chapter.
15. The *ZGJYB* regularly carries notices of adult education institutions that have been approved by the State Education Commission, giving details of courses and qualifications.
16. *SWB FE/8455/bII/12-17*, 2 January 1987.
17. Such calls were usually directed at distance learning institutions such as the RTVU. For example, in 1981 those who failed the conventional college entrance examination were encouraged to go to the non-formal sector (*Xinhua Ribao (New China Daily)*, 2 August 1981, p.1), and in 1983 the RTVU was encouraged to take more unemployed school graduates (*RMRB*, 21 August 1983, p.3). I will deal with this latter issue in more detail in Chapter 6.

18. The full regulations are given in *Guan* (1989, pp.186-7), and a report giving a brief outline in *ZGJYB*, No.536, 26 April 1988, p.1.
19. The 800 hours stipulation is in the regulations and the length of courses was given to me by Professor Liu Yuling, Vice Dean of Adult Education, Hangzhou University (interview 12 May 1990).
20. For example, Hangzhou University had agreement with 16 departments of the Provincial Government, including the Township Enterprise Bureau, and other local organizations such as the Bank of Industry and Commerce (interviews with Professor Liu Yuling, Department of Adult Education, Hangzhou University, 12 May 1990).
21. A person is issued a specific certificate such as 'Professional Certificate in Economic Management'.
22. *SWB* FE/7346/BII/4, 30 May 1983.
23. *Guan* (1989, p.155-60) gives the regulations on admissions and they are reported in *ZGJYB*, No.560, 21 June 1988, p.1.
24. There is a lower figure for admissions of 498,300 from two other sources - *Jiang* (1989, p.8) and *The China Quarterly*, Issue 114, June, 1988, p.336.
25. This figure was reported as 430,000 taking the entrance examination for adult higher education plus 20,000 who already had the qualifications to enter. The total was 75% of the planned admissions for that year (*ZGJYB*, No.716, 27 June 1989, p.2). It could be, therefore, that the actual admission figure was lower.
26. The Seventh Five-Year Plan did not specify any admission or enrolment figures.
27. It may also be that the targets were just too ambitious.
28. This was a point made to me by Mr. Quan Weigang, Deputy Director of Adult Education, Zhejiang Province (interview 9 May 1990).
29. A recent article argued that the decline was a combination of the reduction in the demand for graduates and a desire to reduce the number of poor quality institutions (*ZGJYB*, No.945, 10 December 1990).
30. *GMRB*, 21 January 1988, p.2. Students who reach this standard are referred to as *zigesheng*, 'qualified students'.
31. *ZGJYB*, No.1044, 20 June 1991, p.1.
32. No published figure is available and calculating it from a cumulative figure of 3.7 million for 1986-88 (*ZGJYB*, No.618, 3 November 1988, p.1) gives 1.8 million. This is too high, given that the 1988 figure was supposed to have been the highest since the start of the examination (*ZGJYB*, No.560, 21 June 1988, p.1). I have therefore given an (over?) estimate assuming linear growth.
33. This was calculated from a figure given for 1991 of 1.25 million, that was said to be 100,000 up on 1990 (*ZGJYB*, No.1009, 20 April 1991, p.1). Note, however, that a later source puts the 1991 figure at 1.449 million (see Table 4.3).
34. This is a planned figure (*ZGJYB*, No.945, 20 December 1990, p.3).
35. The events of the summer of 1989 are almost certainly responsible for the low 1989 figure. The 1987 examination was taken in the middle of May, and if this was similar in 1989 then it could have been affected by the earlier demonstrations.
36. *FBIS* JPRS-CAR-89-050, pp.26-30, 22 May 1989.
37. A figure for the RTVU gives little indication of the nature of it, and has stayed steady at one 'institution' per province for most of the time.

38. I have not included independent study students who take the self-study national examinations, because they are not normally included in the adult education statistics, and the statistics are not comparable anyway (e.g. there are no cohorts). What statistics are available will be given in Chapter 8.
39. 1983 was chosen because it represents the year when the institutions that were decreasing in number reached their lowest level, except for education colleges which reached a minimum of 216 in 1985.
40. In fact the 1986 figure for the Staff and Workers' Universities includes that for Peasant Universities, but since the latter is so small it can be ignored.
41. Indeed *Shang* (1989, p.10), a State Education Commission official, suggested a division of labour between conventional higher education and adult higher education, with the former's correspondence divisions and evening colleges providing the high-level education. He attributed this to the quality of running of conventional higher education and its better teachers, a point also made by *Li* (1989, p.50).
42. As for example in Department of Planning, SEC (1986). Such data are only found in annual statistical handbooks (e.g. *Guojia jiaoyu weiyuanhui jinhua jianshisi*, 1989, pp.92-3).
43. Table 3.8 gave figures around 1:1, which had been reached by 1988.
44. The reporting of recent statistics is not clear: in 1990 there were 500,000 enrolled in 'polytechnics' (SWB FE/0719 B2/2, 22 March 1990), and 760,000 enrolled in 'professional training colleges' on two- or three-year programmes (FBIS JPRS-CHI-90-244, p.17, 19 December 1990). These represent about 25-37% of all conventional enrolments, depending on which figure is used. The growth in polytechnic enrolment has slowed greatly in recent years, it having leapt from 47,000 in 1984 (Hu & Seifman, 1987, p.203), but from 480,000 in 1989 to 500,000 in 1990 (SWB FE/0719 B2/2, 22 March 1990).
45. It is not possible to break these data down for all the distance learning systems because they are not provided in compatible forms. In Part 2 I will consider what data there are for each of the systems and draw this together in Chapters 8 and 10.
46. In 1986 55% of adult graduates had studied full-time, and nearly 70% of them were with the RTVU; by 1987 the figure had dropped from 55% to 27% (*Guan*, 1989, p.754). As I will show in Chapter 6, almost all of the RTVU students are employed, and in any case part-time and spare-time is now the norm in the RTVU.
47. I shall consider evidence about the role of the employers in 'decisions to study' for the each of the distance learning systems in Part 2.
48. One of the strengths of adult education is that it encourages 'studying what you work at' (*gan shenma, xue shenma*), and 'learn and consequently use' (*xue yizhi yong*) (*Yi, Xu & Yang*, 1989, p.24).
49. However, *Liu* (1989, p.7) says that a reason given for the decline in admissions to adult higher education is the inappropriateness of specialities.
50. FBIS JPRS-CPA-86-024, p.45, 11 March 1986.
51. The regulations say that they should be gradually assigned to an appropriate job (FBIS JPRS-CPS-86-024, p.45, 11 March 1986).
52. FBIS JPRS-89-065, 38-9, 26 June 1989.
53. SWB FE/1103 B2/6, 20 June 1991.
54. FBIS JPRS-CAR-91-028, pp.76-8, 22 May 1991.
55. For example, the Chinese Scientific and Technical Association's main role consists of organizing lectures and symposia (*Chambers*, 1984, p.185).

56. *Guan* (1989, p.569) discusses a scheme in Beijing of 30 colleges involved in running continuing education over the period 1978-1987. Universities also provide professional qualification programmes (see Chapter 9 for Hangzhou University).
57. By 1989 a million college graduates were said to be involved in continuing education (*ZGJYB*, No.991, 19 March 1991, p.2).
58. Indeed there are confusions in terms used in the two sources for Table 4.12 with *jinxiaoban* (continuing education) and *duanxunban* (short-term courses) being used in *Guan* (1989, p.757), and *jinxiaoban* and *peixunban* (training course) being used in *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.95).
59. It is reported that in 1992 28% were admitted (*The Times Educational Supplement*, 26 November 1991, p.9).
60. I have already noted Li Peng's adding of this to adult education's tasks in 1986.
61. There is some confusion as to just when school leavers were allowed into adult higher education. The RTVU, for example, had almost none until 1986, but the PRC Yearbook Editorial Department (1987, p.458) said they were officially allowed to enter in 1985.
62. Figures of 50,000 (planned) and 52,000 were given in: *ZGJYB*, No.377, 14 April 1987, p.1, and *ZGJYB*, No.413, 7 July 1987, p.1, respectively.
63. The table of this source gives a total of 39,510 but for some reason does not include correspondence education in universities (although it is in the table).
64. *RMRB*, 21 August 1983, p.3.
65. *FBIS JPRS-CAR-89-064*, pp.66-72, 22 June 1989.
66. *ZGJYB*, No.991, 19 March 1991, p.2.
67. Despite this there seems to be concern on the part of some adult educators about the impact of school leavers on the nature of adult education (*Zhang*, 1989; *Wu*, 1989).
68. *ZGJYB*, No.792, 21 December 1989, p.1. The same plea was made in 1985 by a State Education Commission spokesman (*FBIS JPRS-CPS-86-024*, p.45, 11 March 1986).
69. In addition to Hunter & Keehn (1985), I draw upon four recent articles in Chinese journals in my analysis of 'regularization': *Zhu*, (1987); *Shang* (1989); *Wu* (1989); *Dong* (1989).
70. In an analysis of the enrolment reform in adult higher education *Mi* (1987) was concerned that the examination borrowed too much from the conventional system's entrance examination: using a broad range of subjects, rather than ones more specifically related to the speciality to be studied; basic knowledge being emphasised, rather than practical know-how, hence putting a premium on memory and not thinking ability.
71. Chambers & Gardner (1985, p.25); Lo (1982, Chapter 1); Wang (1988); *GMRB*, 15 July, 1983 p.3.
72. In 1988 42% of enrolment in Staff and Workers' Universities was full-time, compared to 30% in the RTVU (there were 84% in Cadre Colleges, but they do not compete directly with conventional colleges) (*Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.90-1).
73. However, *Yi* (1987) claims that adult students are not as creative in their thinking as younger students.
74. These strengths were identified in a survey of employers of graduates in 1984 and 1985 from Shenyang Staff and Workers' University (Cui & Sun, 1989).

75. Hunter & Keehn (1985, p.40) say that work and study are structurally linked when the enterprise runs the college. It means that theory and practice are linked and that problems from the workplace can be taken into the classroom and those who return from study can use their learning.
76. I have already noted the decline in Staff and Workers' Colleges, which are the main mode of enterprise-run higher education, apart from distance learning systems.
77. This includes the RTVU which of course uses a large proportion of part-time staff (50%). Of the face-to-face adult institutions the Staff and Workers' universities do best at 21%, with the others ranging from 5-10% (*Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.91).
78. It is also the case that the official statistics only report correspondence education offered by universities and the few independent correspondence institutions run by other ministries. I will assess other forms in Chapter 7.

CHAPTER 5 DISTANCE LEARNING

INTRODUCTION

The purpose of this chapter is to explore the contribution of distance learning in general (i.e. outside the specific context of China) so that its potential contribution can be established, before examining the contribution of the specific systems in China. The chapter will therefore first set out a vocabulary and concepts that will allow descriptions and later analyses of the distance learning systems chosen for study. It will then examine what distance education has in general to offer to governments, including China's, who may be considering this type of education. The chapter will then give an over-view of distance learning in China, using the vocabulary and concepts from the first section, with brief descriptions of some of the systems that will not be the subject of Part 2 of the thesis. Finally the chapter will end with a consideration of some of the issues that arise in the literature on distance education that are of particular significance to the situation in China.

WHAT IS DISTANCE LEARNING?

Definitions

The concept of distance learning is a simple one: wherever a student is studying at a distance from his or her teacher then distance learning is taking place. Usually the 'distance' is in terms of geographical location, but it can also be in terms of a time frame. Thus at the British Open University a course is produced over a period of two to three years (by writing material and recording radio and television programmes) and the material delivered at a later date to be studied over a period quite unconnected to the one used in constructing the material. Some aspects, such as face-to-face meetings (summer schools and tutorials), do correspond to the students' timescale. This idea of distance is captured in the idea of the teaching and learning being non-contiguous (Rumble, 1989, p.28). Although the idea of distance learning is a simple one, arriving at a set of characteristics that define it is more difficult, and gives rise to much discussion in the literature.¹

Keegan (1980) has stipulated six characteristics of distance learning:

- a. Physical separation (as defined above);
- b. an organizing institution, to distinguish it from private study;
- c. the use of technical media (print, television, audio cassettes etc.);
- d. a two-way communication between a 'teacher' and student;
- e. the student studies as an individual more than in a group (this highlights 'self-study');
- f. the system, particularly for the production of material, is an industrialized form; in other words it involves a division of labour.²

The arguments in the literature over such definitions revolve around how narrow or broad they are (Keegan, 1990, p.44), and hence what they exclude and include by way of existing distance learning systems. Rather than look at the details of individual definitions I want to pick up the two major 'schools' that exist in thinking about distance learning, because it is these that lie behind the arguments. Holmberg (1983, p.4; 1989, p.18) identified these schools as:

- a. one that sees distance education as a distinct form of education, with a focus on individual study and tutoring, with material for large groups, and leading to an industrialized form of material production;
- b. one that stresses the parallels with conventional learning, with regular direct teacher-student interaction, relatively small student numbers, and hence a non-industrialized form of production.³

The first, that leads to the industrial form, involves semi-industrial processes to produce materials. This requires, among other things, division of labour, mass production, application of organizational principles, and technical support (Peters, 1983). Those of the second school, like Garrison (1989), argue for the convergence of distance and conventional education, and are more concerned with ideas of student control and autonomy. Garrison (1989, p.118) claims that there is a move away from the British Open University mass, industrialized form of education, to the small scale operations with the use of new media such as teleconferencing. In doing so people such as Garrison are ignoring the great attractions that distance learning has for many politicians in providing mass access to education, a point I will return to shortly. Perhaps the context of people such as Garrison in a relatively well developed higher education system with high

participation rates (North America) may give them different concerns than those in developing countries. In particular the decentralized education system in the USA, with a variety of types of institutions responding to student demand, contrasts with the centralized system of China. As I have shown in Chapters 3 and 4 the Chinese government is more concerned with education fulfilling the needs of the economy, but in a context of limited spending. The industrialized form gives the possibility of a cost-effective mass education system. I will return to this in the next section when the *Promise of Distance Learning* is considered.

Rumble (1986, Chapter 2) captures this argument between the two schools by examining three educational models that lead to different styles of distance education:

- a. an institutional-based model characterized by a concern for efficiency, mass education, industrialized forms, and that casts learners as passive recipients of the educational message;
- b. a person-centred model that involves individual negotiation between the student and the institution, personal tuition, and student choice of material for study;
- c. a society-based model with a community-based education, centred on groups, involving such things as campaigns and study clubs, and focusing on the real needs of communities.

Rumble (1986, p.39) argues that the institution-based and the society-based models are more attractive to governments because they want to solve national problems (e.g. through mass education) or to carry out social change. Both of these aims have been relevant to China at different times, and both approaches to distance learning have been evident. As will become clear, institutional-based distance learning is the model adopted currently, and the society-based model was more characteristic of the Mao period.⁴

The contrast of the institutional-based and person-based models is reflected in a more general argument about the relationship between open learning and distance learning. This argument, that Rumble (1990, p.50) hoped had now reached a stage where there was broad agreement, sees open learning as a philosophy (an end) and distance learning as a non-contiguous form of education, that may or may not be open (i.e. a means). Open learning has a variety of interpretations that can involve a learner-centred philosophy, or a more general concern to improve the access of individuals to education (Rumble, 1990,

p.29-30). The learner-centred philosophy is concerned with the independence of the learners and their control over their learning, including: control over the objectives, implementation procedures of the learning, learning resources and the assessment (Moore, 1990, p.13). Distance learning may in some cases give this control (e.g. in extended project work) or it may not (e.g. the highly structured and prescriptive course material and assignments of the British Open University). In other words open learning and distance learning are not necessarily related, and are certainly not dichotomous ideas.

DESCRIPTIVE FRAMEWORKS

Different kinds of frameworks

There are several kinds of frameworks to describe a distance learning system:‘

those that say something about the *nature* of the system, for example, using the concepts of structure and dialogue;

those that say something about the *internal activities* of the system;

those that say something about the *structure* of the system.

Framework for nature of system

The two concepts of *structure* and *dialogue* (Moore, 1990) can be used as a way of examining the nature of a particular distance learning system. A system that allows considerable interaction between the teacher and the learner is one high on dialogue. Educational television that merely broadcasts programmes with no communication between the programme makers (or local tutors) and the ‘learners’ is a distance learning system low on dialogue, whereas teleconferencing would be high on it. Structure on the other hand indicates how responsive the educational programme is to the students’ individual needs. Thus distance learning course material that gives students no choice over study order, that involves programmed learning, and has rigid assessment tasks and submission dates, would be high on structure. Contract learning approaches, where students negotiate their own programme, are high on dialogue and may be low or high on structure. Open learning would be high on dialogue and low on structure. Distance learning can occupy a range of positions along these two dimensions. Figure 5.1 shows

how these dimensions can be represented graphically and the various kinds of learning located.

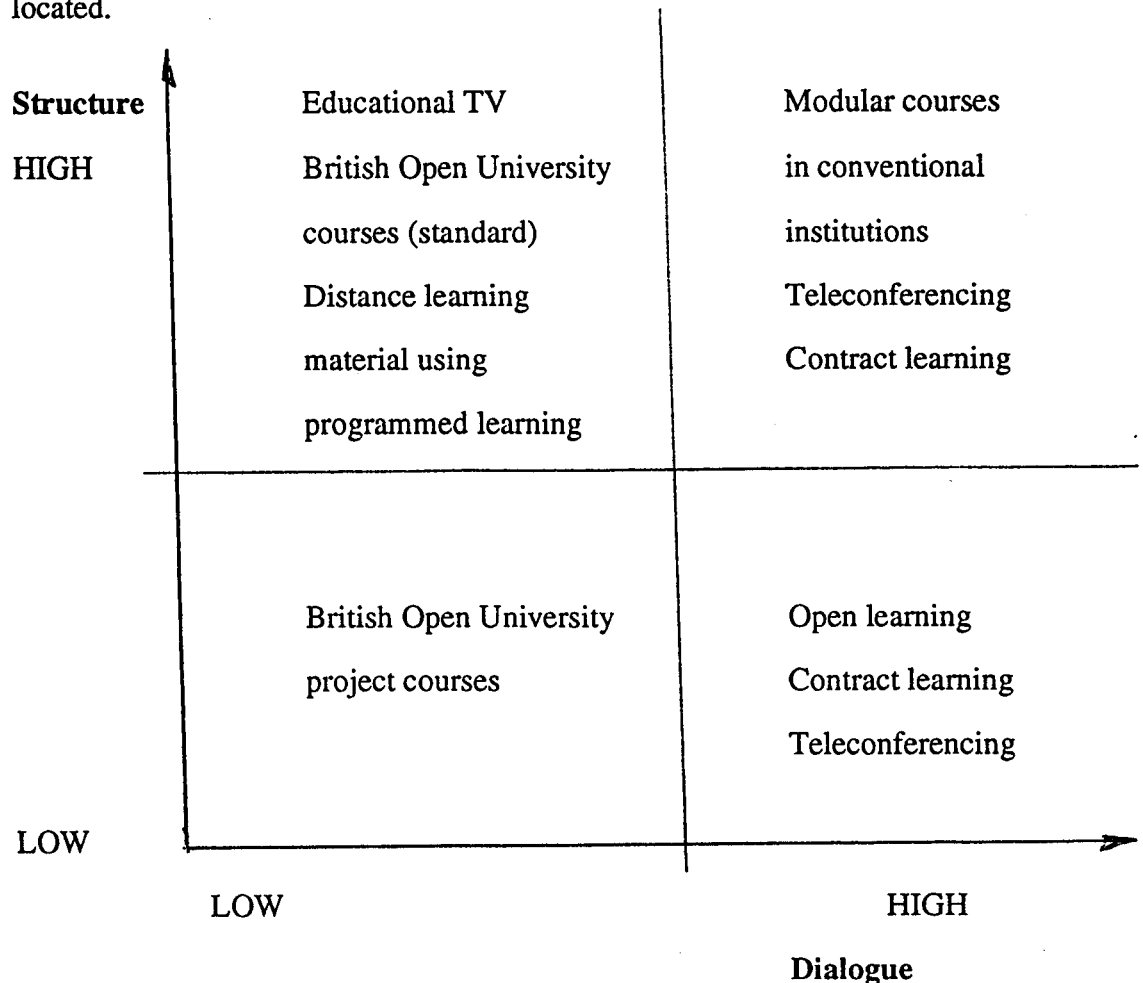


Figure 5.1: various types of learning represented on dimensions of structure and dialogue

Framework for internal activities of system

The frameworks describing the internal activities of the system are of two kinds: systems models, showing the activities as sub-systems, that try to be comprehensive;⁶ descriptive categories that are a mixture of activities and features of the system. Kaye & Rumble (1981) use a systems model to structure their book on distance teaching. The four sub-systems they identify are:

- a. Course sub-system: course creation, course production and distribution.
- b. Student sub-system: admissions, allocation, local centres, tutors and counsellors, fees, assessment administration, and certification.⁷
- c. Regulatory sub-system: management and decision-making structures and bodies, and senior administrators who support the sub-system.
- d. Logistical sub-system: purchasing, maintenance and personnel functions.

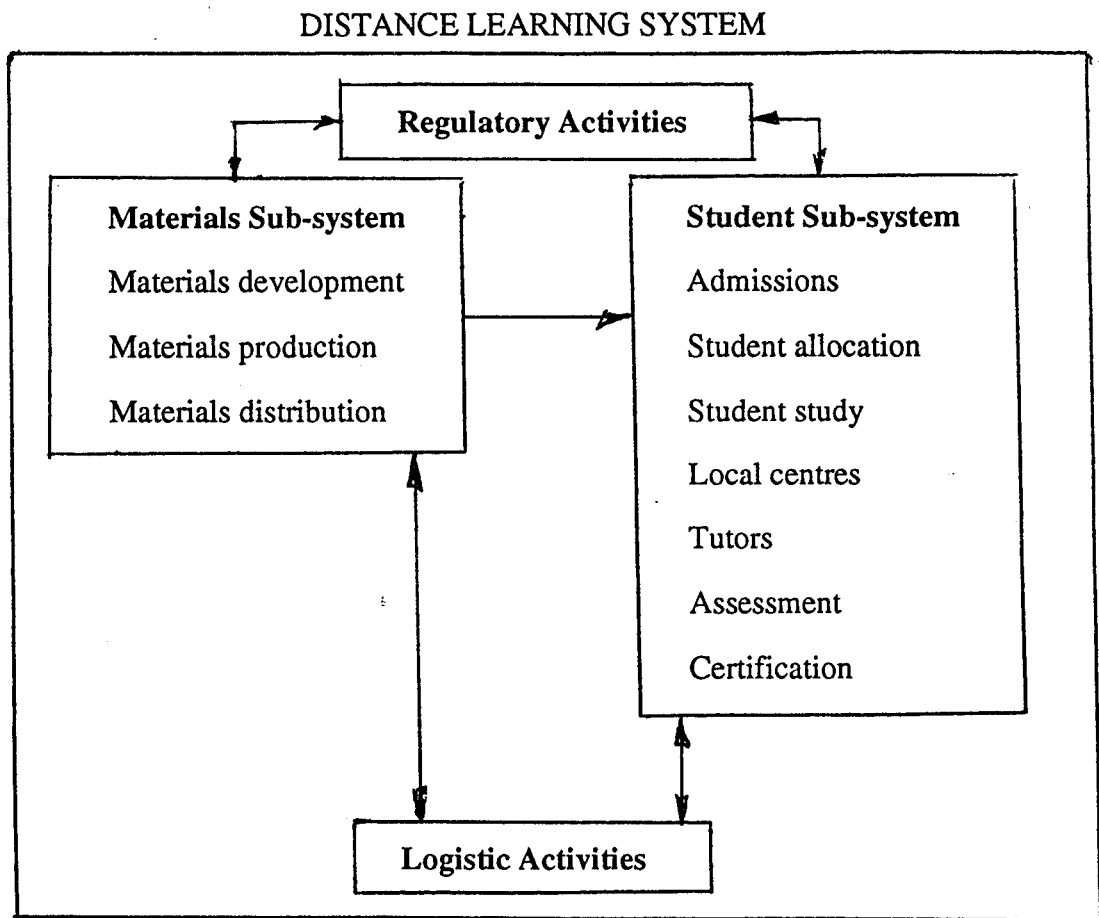


Figure 5.2: a systems model of distance education

Figure 5.2 shows this as a systems model (adapted from Rumble, 1986, p.17). Of course all these sub-systems are found in conventional institutions, although the details may be different. But in distance learning systems not all of the sub-systems, nor the activities within them, need be part of one institution. This is where it is necessary to employ a systems view. In particular treating a system as being made up of sub-systems stresses the interactions among them without presuming that the activities are part of, or under the control of, a single institution. Thus, for example, it would be quite reasonable to have one central institution providing the course sub-system, local institutions providing the student sub-system, and a government ministry of education providing some functions of the regulatory sub-system. In this example the logistic sub-system would exist as part of each of the sub-systems. Figure 5.2 shows an example where each of the sub-systems exists within one institution, although some of the activities within the sub-systems may be geographically separate (e.g. student admissions separate from the local centre).

Neil (quoted in Keegan, 1986, p.134) puts forward four different kinds of sub-systems:

finance;
 examinations and accreditation;
 curriculum and materials production;
 delivery and student support systems.

These appear to be more useful in describing the structures of distance learning systems and apply to the kinds of divisions of responsibility found in China.*

Frameworks for structure of systems

Many of the typologies of structures of distance learning systems contain mainly models of *institutions* (e.g. see those in Keegan, 1990, Chapter 8). Thus, for example, Keegan (1982; quoted in Rumble & Harry, 1982, p.28) gives various kinds of institutions with differing amounts of autonomy, from fully autonomous distance learning institutions to mixed conventional and distance learning institutions (Figure 5.3).

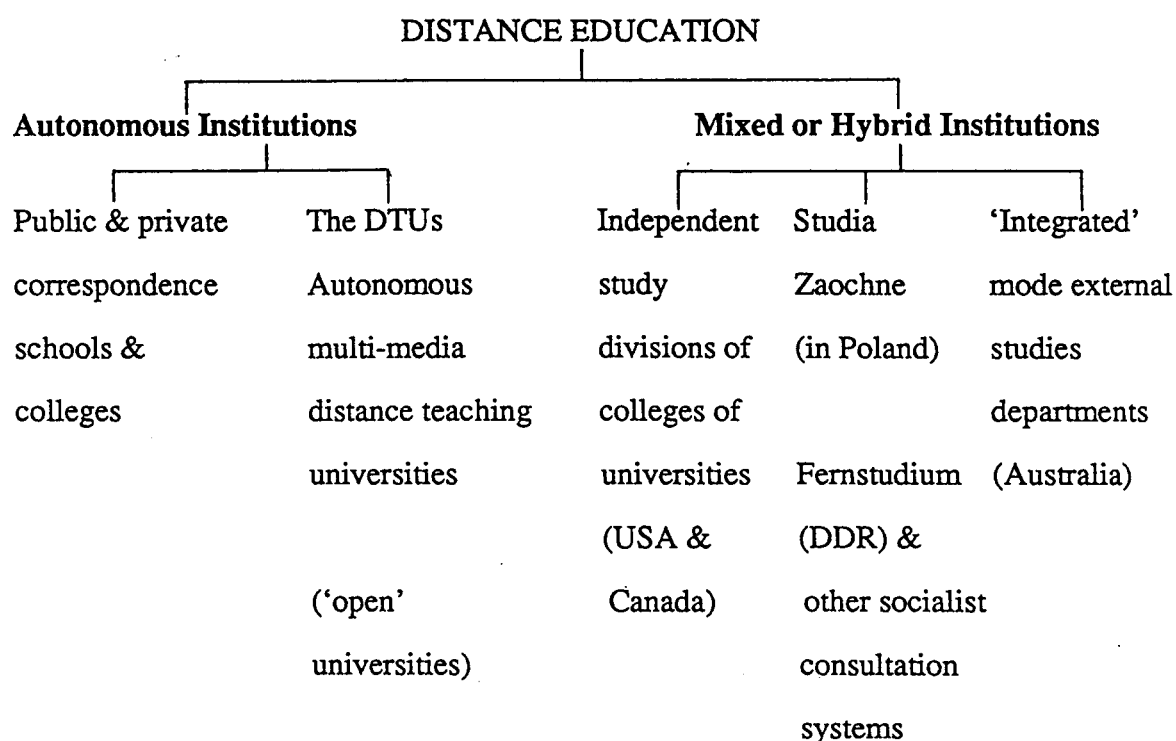


Figure 5.3: typology of distance education institutions (Rumble & Harry, 1982, p.28)

Neil (1981; quoted in Keegan, 1990, p.120) tried to move away from models based upon single institutions and proposed a typology which varied in the way the sub-systems were controlled. Table 5.1 shows a description of Neil's sub-systems and Figure 5.4 (overleaf) tries to illustrate them diagrammatically.

Table 5.1: Typology of distance teaching institutions adapted by Keegan (1990) from Neil.

Classical centre-periphery model	Whole system control model
Associated centre model	Autonomous university with centralized control diminished in area of finance and support services
Dispersed centre model	Autonomous institution which co-operates with a wide variety of institutions
Switchboard organization model	Facilitating centre for DL projects with control exercised by other educational and public bodies
Service institution model	Service institution based on co-operation with other institutions

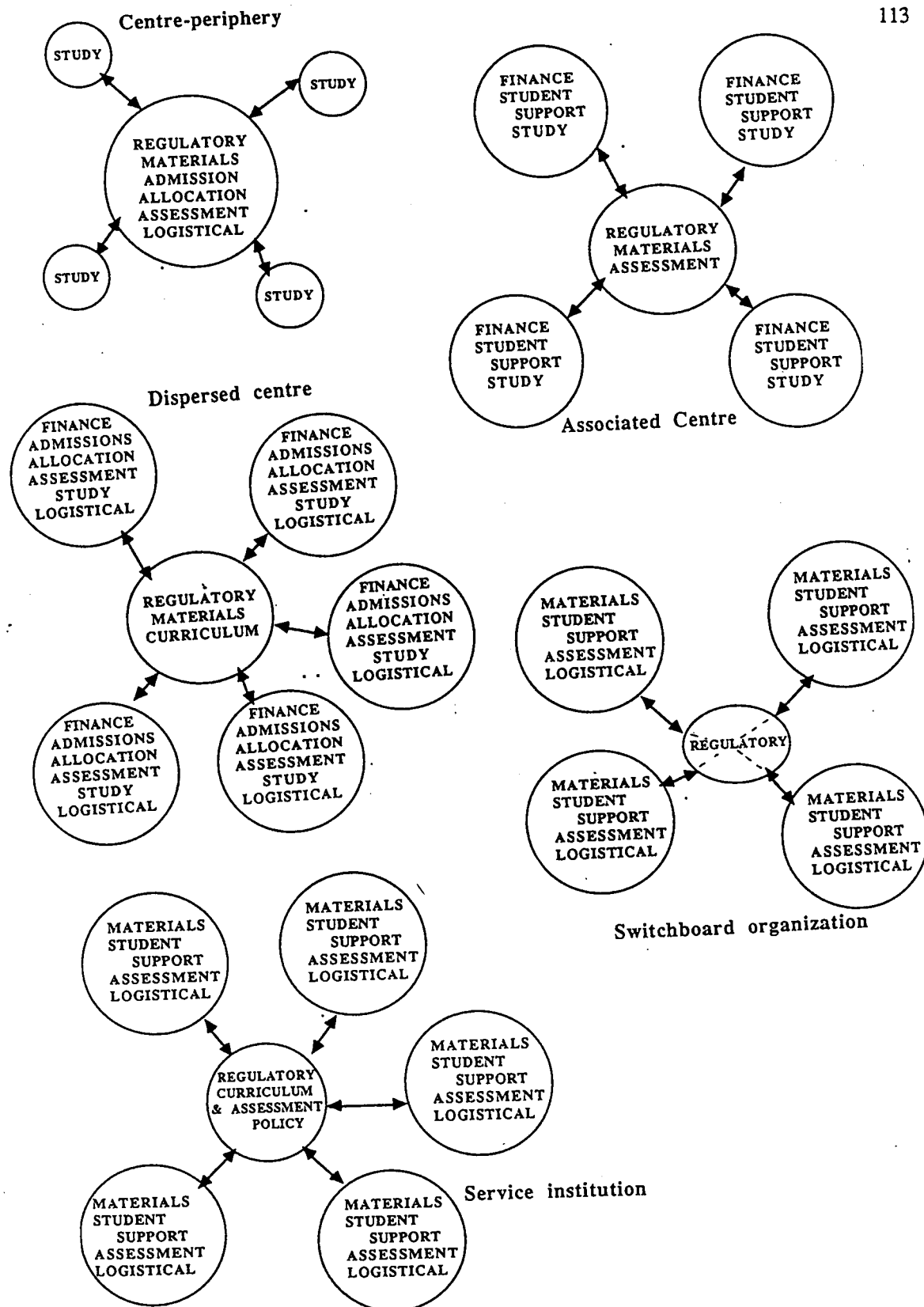


Figure 5.4: models of distance education systems (based on Table 5.1)

The weakness of models that are derived from this (e.g. Keegan & Rumble, 1982, pp.28-30) is that they are typologies of institutions not systems.⁹ The size of China and its balance of centralized State Education Commission control and local provincial government control makes it difficult to think of single unified institutions. Also the self-study examination system is just that, a system, not *an* institution, with the 'examinations and accreditation' and the 'delivery and student support systems' being run by separate kinds of institutions. The 'switchboard organization model' allows for a system that does not have a single institutional organization. I will use this framework in the next section to describe the structure of the various distance learning systems in China.

THE PROMISE OF DISTANCE LEARNING

Motives for its introduction

As noted in the introduction to this chapter, those concerned with the place of distance learning in the education system seek to place it in the context of governments' policies. I have already noted that governments are more disposed to certain forms of distance learning to satisfy their national objectives, and here I will examine some of the general reasons for their interest in distance education, and how they relate to China. The interest of the Chinese government in distance learning is evident in the emphasis and support it gave initially to the Radio and Television Universities (RTVU). When Zhao Ziyang was premier he said that the RTVU were a "greater, faster, better and more economic way to train talented people" (Gao, 1988, p.212).

Rumble (1986, pp.46-61), in considering the political perspective of distance education, puts forward several reasons for the adoption of it by governments: egalitarianism, which leads to the need to increase access to education including groups who are usually at a disadvantage; modernization, and hence its role in economic development; rural development and community education; continuing education and the education of adults; totalitarianism with a desire for social control, and control of the curriculum.¹⁰ To this list can be added the need for better learning methods and more relevant curriculum content (Young *et al*, 1980, pp.6-8 & 14), and cost effectiveness (Daniel, 1983). In the following

sub-sections I examine each of these major reasons for the adoption of distance learning by governments, and at the same time consider them in the context of China. These reasons will provide a framework for the examination of the distance learning systems in Part 2 of the thesis.

Increased access

The international tide of egalitarianism, as part of educational policy, brought with it the desire to increase the access of groups of the population that had hitherto been denied educational opportunities, especially for higher education. This is one feature of open learning discussed above. Access has several (overlapping) aspects:

- a. access for people spread geographically;
- b. access for people of differing educational levels;
- c. access for people of all social classes (not just allowing for their different educational levels, but also a concern for their different needs and concepts of education);
- d. access to those excluded by financial constraints;
- e. access for those excluded at an earlier stage in their life (a second chance);
- f. access for those excluded because of gender, ethnic group or disability.

One radical way access can be increased is by allowing open entry, i.e. requiring no entrance qualifications, nor entrance examination. Open entry has been the policy of only one of the distance higher education systems in China, namely the self-study examination system.

The issue of access, at least as a reflection of egalitarianism, may have less general significance currently in China, but the concern to reach those geographically spread (in rural areas) and disadvantaged groups is still important. Thus although initially rural areas were not beneficiaries of, for example, the RTVU programmes, more recently this has changed both with the introduction of agricultural programmes through educational television, and the proposed development of such programmes in the RTVU offerings. The advent of satellite broadcasting opened up the possibility of overcoming geographical barriers that the terrestrial microwave network suffered from, but, as I shall argue later,

this does not appear to have universally happened. In any case student support by way of classrooms, facilities etc. still favours urban locations. There is more recent talk of the government being interested in using the RTVU as part of its effort to improve the education of the minorities, but no particular efforts are evident.

Added to the desire to increase access is the need to increase the supply of educational places to satisfy excess demand. This may serve groups that are not subject to the disadvantages listed above. The important contribution of distance learning is the fact that it offers mass access, by virtue of its use of, for example, mass media. The importance of trying to satisfy demand is obviously important to China in view of the unsatisfied demand indicated in Chapters 3 & 4, even to the extent of initially encouraging the RTVU to take more unemployed school leavers.

Economic development: rural and continuing education

The adoption of distance learning for economic development depends upon the human capital theory already explored in Chapter 2 as a central motive in all of Chinese education.¹¹ Zhao Ziyang recognized that distance learning offers a speed of development of education provision in a way that the conventional system is unable to match. Usually this expansion is combined with reduced costs per student, but it may be justified even if it is more expensive than conventional educational provision, because it may be the only way large increases in provision, and hence access, can be secured (Rumble, 1988, p.65). I have already pointed out in Chapter 2 that one element of human capital theory is labour force planning, and, in the context of the large provision that distance learning affords, this can be a problem. Rumble (1986, p.52) indicates that expansion of secondary and higher education in the 1970s took place in the face of unemployment and under-employment of graduates of these levels. Daniel (1983, pp.4) notes that the recession of the 1980s revealed a disillusionment with the promises of human capital theory, with some distance teaching universities feeling a little exposed. He concludes that if they are responsive to their governments then they will have nothing to fear. Both the prospects of over-supply and responsiveness are, as I have already indicated for the conventional sector (Chapter 3), issues of relevance in China.

The approach to economic development represented above dominates post-Mao China, in contrast to the emphasis on rural development of the Mao period. This new emphasis, as I have already argued, calls for investment in higher education (and later in technical and vocational education), whereas a concern for rural development might call for investment in basic education. This is also reflected in policies towards distance education.

Hawkrige (1988), in an analysis of the World Bank's world-wide investment in distance education, showed how the Bank focused its projects on primary and non-formal adult education, but that it had moved away from such investment. However, despite this decline and the evidence of the poor rates of return on higher education, the Bank's investment in China's RTVU represented an exception.¹² The 1990s look like seeing a change in China's policy towards investment in higher education.

Another part of the concern for economic development is the recognition of the need for continuing education of already qualified personnel so that they can keep up to date with modern science and technology, for example. Distance learning can contribute to this, although there are arguments about whether employers, individuals or governments should pay for it (Rumble, 1986, p.55), arguments found also in China. Again more recent policy directions are emphasising continuing education in China.

Cost effectiveness

One of the great hopes for governments contemplating the use of distance learning is that it will provide education at a lower cost per student (or graduate) than conventional education, again a point recognized by Zhao Ziyang. This is more strictly a measure of cost efficiency, rather than cost effectiveness, because it makes no assumptions about the equivalence of conventional and distance education.¹³ However, cost effectiveness is the term most commonly used, and it is dependent upon:

- a. large number of students to off-set the high fixed costs (of, for example, learning material development);
- b. low variable cost per student;
- c. high number of students per course;
- d. the 'media mix' (for example, complex TV productions v simple studio lectures; video distribution v broadcast transmissions);

e. interactive activities such as tutorials.

These are of course inter-related with, for example, low variable costs being dependent upon the interactive activities, and perhaps the video distribution costs. The fixed costs are high because of such things as television studios and elaborate teaching material with high print costs. Unlike conventional universities, however, distance teaching universities try to keep costs of buildings for classrooms to a minimum by, for example, renting classrooms in existing institutions. Similarly the variable costs of providing tuition are reduced by using part-time tutorial staff to support students. Indeed Hawkrige (1988, p.92) claims that distance education projects where qualified teachers (tutors) are not available, but where classrooms are, have a *prima facie* case for being highly cost-effective. He puts the Chinese RTVU in this category, but I will question this in Part 2. A simple way of increasing the cost effectiveness is to use part-time study,¹⁴ because not only does this reduce the students' loss of earnings (considerable for a working adult who may have to give up work to study full time), but also the loss of production of the individual to the employer. As I will show this has taken some time to be recognized in all of the distance learning systems in China.

Each individual distance teaching institution will have different cost structures, but many commentators agree that there is a real potential for the cost per student per year being one third that of conventional institutions, and the cost per graduate being one half (Rumble, 1986, p.71).¹⁵

Learning

There were hopes that distance education would bring about better conditions for learning by breaking away from traditional methods. In particular breaking away from the 'banking concept' that sees the learner as a passive recipient of knowledge.¹⁶ This is a point of some controversy in the distance education literature and I will take up this issue at the end of the chapter. Along with this was the hope that the content could become more relevant, and that new areas could be introduced (e.g. computing) for large numbers of people (Daniel, 1983, pp.9-10; Young *et al.*, 1980, p.8-11).

Despite the recognised failures of the conventional system to produce university graduates with adequate thinking and problem-solving abilities (see Chapter 3), there is no evidence that the Chinese government saw distance learning as an improved form of learning. It is true to say, however, that the fact that distance learning students are mainly employed workers was seen as a way of uniting theory and practice.¹⁷ Whether distance learning systems actually produce graduates with improved abilities is of course another question, and one I will return to in Part 2.

Totalitarianism

Universities are notorious centres of unrest and distance education is one way used by some governments of dispersing students to prevent the creation of large campuses of students. Rumble (1986, p.59) gives the example of the Free University of Iran created by the Shah with this in mind. He also quotes Dieuzeide (1985, p.42) on the use of distance education during the Cultural Revolution to stave off the discontent of Chinese youth in the countryside. Although the government in the Cultural Revolution period did not appear to use distance learning as an instrument of totalitarianism, there were instances of it being used by factions to indoctrinate students in the countryside (Chambers, 1980, Chapter 8).¹⁸ Even when the clamp down on students in conventional education occurred in the aftermath of the Tiananmen Square incident in 1989, there was no attempt to shift away from conventional to distance education.

A further form of control is through the learning material, by controlling the content and objectives of learning. Although this can be done in conventional universities, the industrial form of distance education material and its mass production, makes this control more complete. But, despite Chinese government control of curricula, this has not extended to political education within distance education because it has rarely been part of the mass media teaching. Political education in distance education is dealt with at the local level using the same mechanisms as in conventional education and hence has not been subject to any more control than conventional institutions.

Countervailing reasons

Despite the strong motives for governments setting up distance teaching institutions, there are some reasons against their doing so (Perry, 1986, p.18). Firstly, the common feature of open entry looks like an open expenditure commitment. Increased student admissions, uncontrolled by quotas or entrance examinations, means that the government has to be able to pay for study for all students who enter, unless students are charged full-cost fees. In China expenditure can be controlled through the unified entrance examinations for adult higher education which, as I have shown, affected admissions. The self-study examination system is, however, an exception, as I will show in Chapter 8. Secondly, the use of mass media may allow views to be propagated that are unpopular with the government. In the British Open University, for example, there have been complaints from some Conservative Party Members of Parliament that courses suffered from Marxist bias. This is not a threat in China because of the tight control of the Chinese Communist Party (CCP) within organizations. Thirdly, large numbers of graduates from a distance learning institution may represent a large political pressure group. This group is articulate, well educated, and can campaign at a variety of levels including nationally through its student associations etc., although it is less likely to be so volatile as conventional campus students. Again the role of the CCP in China makes such a pressure unlikely.

DISTANCE LEARNING IN CHINA

In this section I want to review the extent of distance learning as a whole in China, to provide a context for the more specific discussions in Part 2. It is worth noting that the term distance education (*yuan juli jiaoyu*) appears for the first time in print in 1979 in a paper presented to the National Education Research Association's first conference.¹⁹ The term was not in general use until the latter half of the 1980s, by which time there was a journal *Contemporary Distance Education* (*Xiandai yuan juli jiaoyu*).²⁰ More commonly the separate terms 'television education' (*dianshi jiaoyu*) and 'correspondence education' (*hanshou jiaoyu*) were used. In a recent Chinese handbook on adult education (Guan, 1989, pp.592-608) the section on distance education includes a brief account of the nature

of open education and open learning (*kaifang jiaoyu*, and *kaifang xuexi*), along with descriptions of the following aspects and types of distance education: mass media education (*chuanboxue*), the RTVU, the Television Teachers' College, correspondence education (*hanshou jiaoyu*) including those in existing universities and colleges and the Beijing Post and Telecommunications College Correspondence Branch College (*Beijing Youdian Xueyuan Hanshou Fenyuan*), the Agriculture Radio and Television Network (*Nongye guangbo dianshi jiaoyu wang*), the Central Agriculture Radio School (*nongye guangbo xuexiao*), Agriculture Radio and Television School (*Nongye guangbo dianshi xuexiao*), and the Beijing Agriculture Radio and Correspondence School (*Beijing nongye guangbo hanshou xuexiao*). In addition to these specific institutions there is open broadcasting on radio and television, some of which is targeted at specific groups (e.g. secondary technical students), and others that are of general interest (e.g. various language programmes, most notably English). Some of the distance learning institutions are under the Audio-Visual Department (*Dianhua jiaoyu si*) of the State Education Commission, as Figure 5.5 shows. This department has its provincial equivalents as will be shown in Chapter 9.

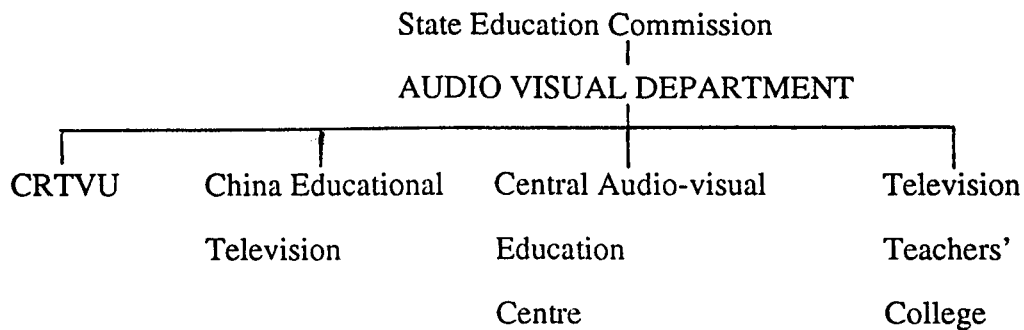


Figure 5.5: distance education systems under the Audio-Visual Department of the State Education Commission

In this section I will therefore consider very briefly the distance education systems that are examined in detail in Part 2, before describing other systems found in China, namely: the China Television Teachers' College, general education broadcasts, the 'Prairie Fire' School, and the Agriculture Radio and Television Network. First, however, I will

examine the conditions that exist to support distance learning and upon which any particular system must be based.

The infrastructure and conditions for distance learning

There are a variety of conditions that need to exist for distance learning to take place successfully. Obviously these conditions depend upon the form of distance learning, but I will consider three overlapping categories: communications and media; equipment and facilities; study conditions. The information on these conditions is not generally available in a systematic form and so at times I can do no more than generalize from personal observations in China.

Communication media

The communications media of concern in the case of China are the broadcast media (radio and television), postal and telephone communication, and print.²¹ While radio ownership is probably very widespread, and reception almost geographically complete (apart from mountainous regions),²² television is less pervasive. According to surveys there were some 140 million television sets in use in 1990, and the growth in production and hence ownership has been dramatic as Table 5.2 shows.

Table 5.2: ownership of television sets per 100 households, total number of sets in use and audience figures for selected years 1981-1990

<i>Year</i>	1981	1986	1990
<i>Urban B/W</i>	57.06	65.42	55.71
<i>Colour</i>	0.59	27.41	51.47
<i>Rural</i>	0.87	17.28	37.54
<i>Number of</i>			
<i>sets (millions)</i>	15.62	92.14	140
<i>Audience (millions)</i>	270	580	n.a.

Sources: 1981 & 1986 Yu (1989, pp.103 & 106); 1990 SWB FE/W0144 B/1, 5 September 1990.

Of course household ownership of television is not necessarily the crucial figure because communal viewing at centres and educational institutions can increase the access to

everyone, provided they are within convenient travelling distance. As Table 5.2 shows television ownership is greatest in the urban areas and this, coupled with the concentration of associated educational facilities, is likely to make learning through this medium less common in the rural areas. Indeed of the 580 million viewers in 1986 (Table 5.2), 63% were in urban areas and 37% in rural areas (Yu, 1989, p.105). There are, however, agricultural programmes geared to these areas. Recent viewing figures are not available, but the 1986 figure represents about 50% of the population. The figure for the percentage of the population covered by television broadcasts (whether they can receive them or not) is much higher than the viewing figure at about 75%.²³

The wide availability of radio has meant that educational agriculture programmes have been a feature for much longer than for television, as I will show shortly. Audio-cassette players are also becoming more common with ownership being at 60.99 million in 1987 (Xie, 1988, p.16). Apart from their use for entertainment they are most likely to be used for language learning. Video-cassette recorders are becoming available for use in the home, but at about twice the UK price they are still rare. China does not yet produce its own VCR and so they are expensive imports. They are available in most higher educational institutions, though probably kept under lock and key and hence difficult to gain access to.

Television satellite broadcasting started in 1985, and for radio in 1986 (Xie, 1988, p.17). In 1986 a satellite made available an exclusively educational television channel, China Educational Television (*Zhongguo jiaoyu dianshitai*), administered not by the Central Broadcasting Bureau (*Zhongyang guangbo shiyeju*), but by the Bureau of Audio-visual Education, which is in turn under the State Education Commission.²⁴ There are two CETV channels transmitted by satellite, the second having been introduced on 1 November, 1988.²⁵ and the programme schedules are printed in *Zhongguo Jiaoyu Bao* covering a two-week period. Two channels on the national microwave network are also used for educational programmes,²⁶ and in addition local provincial stations have their own educational output.²⁷

The transmissions are received at ground stations using dishes several metres in diameter. There are 700 ground stations and 25,000 centres for receiving signals (Zhou, 1987, p.21).²⁸ The intention is that wherever possible local television stations should re-transmit the signal, but this seems to be the exception (Hawkrige, 1990, p.12).²⁹ In areas where the geography is unsuitable for satellite reception video-cassettes are used, and in fact this seems to be the norm in many places because of the difficulty of reception outside the main ground stations. As I will show in Chapter 6 this is a significant feature in the delivery system of the RTVU.

For both radio and television there is one abiding problem for access to the media, namely the spoken language. Howkins (1982, p.53-4) estimates that 70% of the population speak standard Chinese (*putonghua*), but that in some areas only a few percent of the population may speak it. In such areas the dialect may only be understood by people within a 35 mile radius. This problem, although not a major obstacle, does mean that giving access through distance learning to geographically remote areas is difficult, especially with a centralized production of educational material. One solution is to have more decentralized production, and the fact that the five autonomous regions have local official language programmes on an equal footing with standard Chinese helps this (Xie, 1988, p.17).

Postal services are efficient in China for those areas within the main transport system and have been used for correspondence education for some time.³⁰ Again the main problem is for remote rural areas. Also the postal service is not a good method for the sole distribution of centrally produced course material. Imagine a mailing to several hundred thousand students at the beginning of a study year!³¹ This has major implications for production lead-times for such centrally produced materials, and for systems of decentralizing distribution, and perhaps production.³²

The telecommunications system is not anything like so well developed, though it is improving rapidly. In 1982 there were 3.7 million telephones, mainly in places of work. Rural areas were again the least well provided for with 80% of the population only having access to 50% of the telephones (Howkins, 1982, p.96-7). Whatever the improvements

that have occurred since 1982 it will be a considerable time before the telephone will be a suitable means of communication for distance learning.³³

As the birthplace of print it would be surprising if China did not have a well developed printing industry. The figures for print-runs, given on all books, are staggering by British standards, and large bookshops (usually *Xinhua shudian*) are found in all cities. Here I will mention only the problems as they relate to distance learning. The first problem is the general quality of paper used in most books. This quality is such that illustrations can only be suitably reproduced if they are line drawings. Half-tones do not reproduce well and colour is a luxury that cannot be afforded. The use of poor quality paper arises because of the large print runs that result in the variable cost of paper being the biggest single item.³⁴

The second problem is less obvious, and difficult to assess. My experience in discussing graphic design with staff at the CRTVU, even those on the editorial side, reveals established conventions that hinder the use of text for distance learning communication purposes. In particular short paragraphs, first line indentation, and numbering systems all prevent readers employing efficient study techniques, and I will say something about this in Chapter 6.

The third problem is the distribution of texts. Although there are bookshops, these are mainly in large urban areas and they only stock popular books.³⁵ Conventional universities, for example, have to run their own bookshops to stock those books they require for their students. The RTVU study texts are almost unobtainable even in such large cities as Nanjing and Hangzhou.³⁶ This may be as much a comment on the standing of these texts as an acknowledgement by the RTVU that they need to use other mechanisms to distribute course material.³⁷ The result is that less material becomes available for those who want to follow distance education courses without perhaps registering. Finally, public libraries are not common outside the major cities, and even in colleges they can be poorly stocked.

Equipment, facilities and study conditions

To some extent these depend upon the particular distance learning system (RTVU, correspondence education and self-study examination system). However, I will deal with it in terms of individual, home-based study, although that is not the most common situation. I have already mentioned household ownership of radios, televisions, and audio-cassette recorders, and these are obviously becoming increasingly available for study purposes. Home computing is almost non-existent; microcomputing equipment is not yet common in small colleges. All this means that study is still likely to be mainly print-based. The problem is, then, are home conditions suitable for study? Given the housing conditions in China the answer to this question must be no. Individuals are unlikely to have either the space or the quietness necessary for study.

Even if home-based study is discounted then students must be within travelling distance of existing educational facilities that have the kind of equipment described above. As before it is the urban areas that will satisfy this condition, and rural areas will be at a disadvantage. Along with the physical facilities existing institutions can provide tutor support from their staff. So potential rural students suffers from a multitude of disadvantages, even although the technology exists to overcome the 'distance' between them and any 'teacher'.

Individual study time

The importance of spare-time study to the cost effectiveness of distance learning has already been pointed out. But for employed adults there is a lack of spare-time, as Ogden (1982, p.97) notes. She rightly argues that with a six-day working week and laborious domestic chores it is difficult to fit in time for spare-time study. Even married RTVU students who study full-time admit that these chores mean they are unable to study on a Sunday.³⁸ The description of urban life in China by Whyte & Parish (1984, p.175) shows that most adults with families only have time late in the evening to study, and with early starts for work this is not convenient. Most people have Sunday off (unless they are on shift work) but that is half taken up with domestic chores, and half with walking in the park, window shopping, film-going and socializing with friends. The increase in

availability of consumer durables such as washing machines and refrigerators will release families from the time consuming tasks of washing and daily shopping.³⁹

Despite these deterrents there is a real determination to pursue study. As I shall show in Chapter 8, when discussing self-study examination students, even when there are few tangible rewards and little support, large numbers take up study.

The main systems: the Radio and Television Universities, Correspondence Education, and the Self-Study Examination System

In this section I only want to indicate how these distance learning systems fit into the definitions and analyses of distance learning systems presented earlier in the chapter. Part 2 will deal with them in detail.

Radio and Television Universities

Most students at the RTVU study full-time; they do this at local centres by viewing television programmes (mainly of a lecture style) as a group and studying texts, many of which are specially prepared for them. The centres can be in factories or in specially established premises (branch schools). These centres also provide a tutor who can help students with problem classes or tutorials. Most of the study material (television and print) is produced by the Central RTVU (CRTVU) in Beijing and transmitted and distributed to the local centres. The CRTVU is responsible for drawing up the academic programme, setting the examination and producing the teaching material. Provincial RTVU (PRTVU) carry out the administration and are responsible for registering and accrediting students, working through the branch schools and factory workstations. At the provincial level the provincial education commission is responsible for the operation of the PRTVU. The courses are mainly of a diploma level (*zhuanke*), but a variety of professional and secondary technical courses are also being developed.

In terms of the definitions of distance learning the idea of non-contiguous education is satisfied, because the tutor only plays a subsidiary role, and in some cases there may not be one. Keegan's six characteristics are largely satisfied, except for the fact that students

do not study as individuals, at least no more so than they do in conventional institutions. The system falls right between the two schools of thought on distance education: it has all the characteristics of the industrialized form of course production, but in operation for students it is much like conventional education, but with more use of audio-visual media. There is not, however, the student control and autonomy favoured by Garrison (1989) and others. In Chapter 6 I will consider what type of model suitably describes the RTVU.

Correspondence education

There are a variety of types of correspondence education, including departments in conventional universities that provide equivalent courses to students within a relatively local area, and central independent correspondence institutions with a national remit. They have the usual features of correspondence education, with printed material, communication by mail with a central tutor (including for assignments), and examinations. But more unusually students go to a total of four weeks face-to-face sessions, requiring time off work. Where the correspondence education is run by conventional universities courses are identical to those that full-time students take, and they are awarded the same qualification.

Applying Keegan's definition of distance learning there is less of a match than for the RTVU, because the media used are less technical, the material production is not industrialized, and again there is a relatively large amount of group study.

Self-study examination system

The idea behind the self-study examination system is very simple. Students study on their own, follow a prescribed syllabus, in some cases use recommended material, and then sit a recognized examination. The syllabi and examinations are set at a provincial level, under national directives, and students are awarded recognized qualifications.

Examinations are held twice a year, although in some areas only once, and candidates must register three months in advance.⁴⁰ The timetable for examinations is displayed on public information boards (that exist in most towns and cities) and students can choose any they like.⁴¹ If they are studying for a diploma or degree they will have to follow the

teaching plan for the speciality and plan their programme of examinations for each course required.⁴² Examination halls are set up in localities so that candidates can sit the examinations (Cheng, 1988), although conventional colleges are used for experiment-based examinations. It will take about two to three years for a good student to complete a diploma (*zhuanke*), and most others from four to six years.⁴³ The student decides whether or not to undertake any instruction offered by colleges and other organizations, and there is advice, from the local committees, on the tuition available. The support to students is varied, as I will show in Chapter 8, but that support is not the responsibility of the body that organizes the examination..

The self-study student examination system only with difficulty matches either the definitions of distance learning, or the frameworks to describe the structure. It has no single institutional organization, no necessary technical media or two-way communication, and no industrial form of material production. Nevertheless it is different from private study.

Other systems

As indicated in the introduction to this section there are a number of other distance learning systems that will not be the subject of detailed discussion in Part 2. In this subsection a brief survey will be included to give some idea of the range and scope of these systems. It will include both higher and other levels of education. As these systems are not the main subject of the thesis the descriptions will be more detailed than those for the RTVU, correspondence education, and the self-study examination system given above.

The China Television Teachers' College (Zhongguo dianshi shifan xueyuan)⁴⁴

This College was started in 1986 to meet the needs of the huge primary and secondary teacher improvement necessary as part of the introduction of the nine-year compulsory education programme.⁴⁵ Chapter 3 (Table 3.2) has already quantified the extent of the problem of under-qualified and unqualified teachers (1.45 million in primary schools, 1.42 million in junior secondary, and 0.28 million in senior secondary). The government targets are more modest, requiring some 0.45 million primary and 0.22 million junior

secondary school teachers trained by 1995. Distance learning, including correspondence education, is an essential approach for inservice training because it does not require teachers to leave their post while training. In small two-teacher rural primary schools such a requirement would make training impossible. In addition in provinces that have a large geographical spread of population, such as Xinjiang, the satellite system is welcomed.⁴⁶ As Chapter 9 will show, coastal provinces such as Zhejiang (and also Jiangsu) make less use of the satellite Television Teachers' College, because other kinds of provision are better.

The courses have to match the above requirements for inservice training. For primary school teachers the requirement is for middle school level, and for junior middle school teachers it is diploma level (*zhuanke*). In addition the College runs a course for the 2 million primary and middle school principals. The State Education Commission wants all these principals trained within 3-5 years. The courses for primary school teachers include both subject knowledge and understanding (e.g. Mathematics, geometry & algebra) as well as teaching methods (e.g. Mathematics teaching method).

Junior middle school teachers have twelve subject courses, and senior middle school teachers seven. For the principals there are five subjects: Basic theory of Marxism and Leninism; Educational policy and regulations; School administration; Education administration psychology; Education practice.

The course material consists of the television programmes and specially constructed textbooks. The programmes are broadcast by satellite on CETV in the mornings, starting at 6:00am, and in the evenings, starting at 7:15pm, seven days a week. (Appendix 2 shows the programmes for a week in November 1990 for Channels 1 and 2.)

As outlined earlier programmes are not usually received directly by students, except for those who are able to go to a county or commune level ground receiving station. Otherwise they can view re-broadcasts of the programmes on county-level educational or general broadcasting channels, or watch a video tape that has been recorded in a local

Audio-visual Centre.⁴⁷ Up to 1990 108 courses had been transmitted and the primary school courses are on their second transmission series.

Courses are usually prepared in a tripartite arrangement, controlled by the College. They pick a teacher from a nation-wide selection of universities, normal universities, colleges and normal middle schools, then choose an organization prepared to do the television production (a college or a provincial audio-visual centre), and together with a publisher (*Renmin chubanshe*) design the course. The College simply approves and administers the course production.

Students usually study in classes of 30-40 that are organized by the existing teacher training institutions under the provincial education commissions. These can be either teachers' colleges or teacher training (normal) secondary schools. Some teachers may be organized by the PRTVUs, and some study on their own. The provinces and municipalities are responsible for the enrolment, examinations and certification of students. Thus the Television Teachers' College has no direct involvement in the teaching of the courses it prepares. For this reason the College was unable to supply any student enrolment figures, though they did say they expected 200,000 graduates in 1990. For primary school teachers the success rate was given as 80-86%, and for secondary as 60-70%. Press reports give much higher figures: in 1989 1 million had studied for qualifications in the two years of operation and several million were viewing demonstration lessons.⁴⁸

Given the lack of direct involvement with students, and lack of direct materials production work it is not surprising that the staff is small. There are 22 staff altogether in three divisions: one for teacher training, one for principals' training and one for educational administration. In addition there is an administration office. In the teacher training division one member of staff looks after one course. The model of the system is therefore close to the 'switchboard' organization described in Table 5.1; the College does not even lay down the course policy, that being defined by the State Education Commission,⁴⁹ though it does specify the television programme content. In terms of Keegan's characteristics of distance learning the College satisfies most of them, though there seems

to be no information available about what the face-to-face element is like, and the College is not really the organizing institution. This is to be expected from a 'switchboard' model.

Comprehensive education television programmes (Zonghe jiaoyu jiemu General broadcast programmes)

These are put under the title of 'Comprehensive Education Programmes' (*zonghe jiaoyu jiemu*) and seem to represent a general education output, not related to any specific courses or institution. However, some of them, especially on Channel 2, are very specific and seem to be aimed at teachers. For example, there are a whole series of programmes of recordings in primary school classrooms, and an education news programme. In addition there is a series of vocational and technical education programmes dealing with specific topics in food production and skill-related areas such as tailoring. These latter programmes may be related to specific courses, but I have no information on this.

The 'Prairie Fire' School (Liaoyuan xuexiao)

This comes from a famous Mao saying and is a development of the 'Spark Plan' of the State Science and Technology Commission aimed at developing science and technology in the rural areas to improve agriculture. Thus the 'Prairie Fire' (*Liaoyuan*) School is aimed at practical training and basic skills for peasants. The CRTVU is responsible for co-ordinating the production for these television programmes, but they are produced by a variety of agencies. The organization of peasants to view and 'study' these programmes is the responsibility of vocational training schools and other adult education institutions, under the control of the provincial education commissions. Trial programmes began at the end of June 1990, and the School was launched in July. It is too early to be sure what is happening on the ground, but there is now a regular programme schedule on Channel 2 of CETV. One hour is transmitted per day six days per week (not Tuesdays), with half of the programmes being repeats. Naturally they are on farm related topics, such as processing various kinds of soya bean products, breeding rabbits for meat, and new planting machines. There are associated printed materials but in 1990 these were existing books, with specially prepared ones related to the television programmes coming later.

*The Agriculture Radio and Television Network (Nongye guangbo dianshi jiaoyu wang)*⁵⁰

This network is similar to the RTVU, in that it consists of a central agency, and various local organizations, though at county and village level not at provincial level. There are some 2,300 county level and 24,000 village and town level units that have set up classes and organizations to manage them. It has its origins in the Central Agriculture Radio School (*Zhongyang nongye guangbo xuexiao*) that was founded in 1981 under the auspices of the Ministry of Agriculture and Fisheries, the Ministry of Education, State Planning Commission, the Finance Ministry and several national organizations such as the Young Communist League. In 1987 this School merged with the China Agricultural Accounting Correspondence School (*Zhongguo nongye kuaiji hanshou xuexiao*) to form the Agriculture Radio and Television School (*Nongye guangbo dianshi xuexiao*). Courses are aimed at imparting mid-level agricultural technical knowledge, and seven specialities are available at *zhongzhuan* level. Satellite transmission of television programmes started on 4 January 1988, but only lasted until the 23 January, and did not resume until 1 September, 1988. They have continued since that date on Thursdays (13:45-16:50) and Sundays (13:00-16:30 approximately) using Channel 1.⁵¹ Since 1981 there have been 1.5 million admissions, and in 1981 and 1984 there were a total of 200,000 graduates.

ISSUES

General

The issues I will examine in this section arise from the general literature on distance learning. Three inter-related issues are of particular relevance to China because of the particular ways distance learning systems have developed: the nature of the learning experienced; the use of the media, particularly television; the balance between quality and quantity of the learning. But before taking these up in detail let me reflect briefly on the range of minor issues picked out by observers of the world distance learning scene, to get a sense of perspective. Daniel (1983, pp.12-20), in taking such a world-wide perspective, considers six topics: drop outs, media, standards and status, costs, organization and leadership.

The issue of **drop outs** is an obvious one for distance learning, and the evidence is of a large variation in level around the world. Systems that are 'self-paced', in other words that allow students to study at their own individual pace, have high drop-out statistics. More correctly they have low through-put (programme completion), because students register, but do not graduate. For distance learning systems that are geared towards specific qualifications the figure that is important is the rate of graduation, not the numbers who pass individual courses. This is of particular interest to those distance learning systems, like the self-study examination system in China, that have a looser control over student progress.

The issue of **standards and status** arises in the attempt by a newly established distance learning system to set good standards and to have its status accepted alongside the conventional sector. This is crucial when the distance learning system is offering parallel qualifications to the conventional sector. By and large this has been achieved by distance teaching universities, but Daniel (1983) argues that they need to keep telling people that this is the case. I will explore this below for China in the context of the nature of learning and the cultural differences that may exist over views of distance learning systems.

The **organization** issue identified by Daniel (1983, p.19) concerns two factors that determine the success of a distance learning system: the degree to which the organization has a direct relationship with its students, and the relationship between the number of students and institutional income. Thus if students enrol with other institutions rather than the one organizing the distance learning, as is the case with the Television Teachers' College, then its success may be adversely affected. Similarly if expansion of the student numbers does not bring benefit in terms of income to the system it may also limit success. The central funding of the CRTVU, and the student fee income going to local levels may be a problem for the expansion of the RTVU in general.

Active **leadership** of a distance learning system is needed in the early days of its life, especially if competing with the conventional sector that may itself have dynamic leadership. Again in China, with a tradition of university leaderships being at the behest of the government, especially if they are centrally funded and prestigious institutions,

there is a problem. For example, the CRTVU has suffered because there has been no active President since the very early days of Duan Luofu, who sadly died before his vision of the University could be realized, having only served for one year. Currently the minister He Dongchang assumes this role, as he has done for the last seven years since the retirement of the second president Wang Yishan, who then was in his seventies.

The nature of learning

Liberal views associated with the general ideas of the 'independence and autonomy' school, that are as much concerned with open learning as distance learning, are not relevant to China. As Rumble (1986, p.39) has noted governments are likely to be more interested in institution-centred or society-centred models of distance education. This may be so because of the concern on the part of the government for increasing supply, and improving access to higher education. But ideas of self-improvement are relevant in China. Wedemeyer (1983) argues that the traditions of self-improvement, informal study groups and the self-made man (sic), were important to the development of the USA. It is this kind of learning, stressing student independence and autonomy, that forms the historical roots of the stance taken by Garrison and others noted above. The parallels with Mao's views of self-study etc. discussed in Chapter 2 are obvious, but relate more to the motivation for study than to the method of study. This motivation needs to be borne in mind when considering the nature of the learning experience of distance education and whether it offers an improvement over conventional education. But the motivation does provide a rationale for the self-study examination system that I will be discussing briefly below and more fully in Chapter 8. In addition it justifies, for example, the highly instructional programmes on television for people interested in secondary technical education, but who are not registered with any particular distance education system (i.e. open broadcasting).

The institution-based model of a distance learning system, which may now be the relevant one in China, has a particular view of learning implied. This view is of a passive learner who is the recipient of transmitted knowledge, the 'banking concept' referred to earlier (p.118). Those who seek to stress student control and autonomy (e.g. Garrison, 1989)

think the future lies not with mass systems such as the British Open University, but with small-scale group-based systems such as afforded by teleconferencing. What such advocates discount is the Holmberg idea of 'simulated guided didactic conversation' (Holmberg, 1989, p.156), an example of which is a text that has been specifically designed to involve a student in the area of study, rather than just requiring the student to commit its contents to memory. I have already noted that there is no evidence that the Chinese government saw distance learning as an antidote to the poor teaching methods examined in Chapter 3, though there has been a general interest in the prospects of improvements brought about by educational technology.⁵²

For people such as Garrison (1989) the crux of distance learning is still the educational transaction, focused around two-way communication. Without the possibility of dialogue Garrison would see the text merely as transmission of content, and this probably fits the Chinese view of learning. Despite the myths about such dialogue in conventional institutions, it is likely that in China the teacher-pupil relationship would be seen as central, at least among university teachers. This view may be transferred to the distance learning context, where the television 'lecturer' may be seen as the students' teacher.⁵³ This view points to the possibility of there being a cultural difference for certain societies that makes the adoption of distance learning difficult.⁵⁴

Set against this tradition of a strong face-to-face and a personal teacher-pupil relationship is the self-study tradition that I referred to earlier when discussing the relevance of open learning to China.⁵⁵ This may be more to do with self-improvement than with self-study, but is nevertheless a strong motivating force as the student registration figures for the self-study examination system show (Chapter 8). It is possible to postulate that learners may be more attuned to the strengths of self-study than are the teachers. The evidence of the reluctance of CRTVU teaching staff to move away from traditional models of teaching even when using new media, in contrast to the 'enlightened' views of their students that I will present in Chapter 6, tends to support this hypothesis.

For distance learning to improve independent thinking and self-study capabilities it must make sure that the learning materials encourage active learning and hence use the 'guided

didactic conversation' mentioned above. It is the use of such specially prepared materials that distinguishes distance learning from private study. Although some commentators on Chinese distance learning see distance learning as a possibility for improving learning methods (Daniel, 1988, p.22; Yu, 1986, p.95), I am cautious about this, as I hope to show in Part 2.

The debate between those who see distance learning as distinct, and emphasising individual study (Keegan, 1990) and those who see it as merging with conventional face-to-face with the group as the focus (the two schools noted earlier) unfortunately misses the importance of *group learning*. Rather both focus on the *existence* of a group. Perraton (1982, Chapter 4) discusses the importance of group learning in adult education, and this is illustrated in campaign style society-based distance learning models (Rumble, 1986, p.34-5). Although this style may be more in keeping with the Maoist line (see Chapter 2) rather than the apparently institution-based ones of the post-Mao period, the use of video gives new possibilities as I will show below.

Use of media

The introduction of the medium of television has moved distance learning on from the limitations of correspondence education as it has been traditionally found. There are possibilities of improving the learning experience.⁵⁶ The particular way the media is made available (the 'delivery'), through broadcasts or video cassettes, has implications for the nature of learning and access to the media (Bates, 1988), both of which I will deal with below.

In the early 1980s those involved in Chinese television education (both open broadcasting and CRTVU programmes) simply considered broadcast television as a neutral delivery medium,⁵⁷ and so used it as a replacement for conventional lectures i.e. as a source of information transmission. In distance learning, texts can fulfil this function. The prospects for improving learning through using television depend upon using its presentational characteristics, such as being able to move from concrete ideas to abstract ones, and providing documentary or case study material for student analysis (Bates, 1988, pp.215-9). There is evidence of a move away from 'information transmission' in China,

although there are difficulties related to having the resources to do more technically sophisticated programmes, as well as the conservatism on the part of the teachers, noted earlier.³⁸ There are now many examples of innovation in programme making, reflecting a genuine attempt to use the unique characteristics of the medium, some of which I will mention in Part 2.

Even taking the neutral ‘delivery’ view of television raises the prospects of controlling learning in different ways. Broadcast television is an ephemeral medium, whereas video-cassette distribution allows replay and hence later viewing and repetition. In fact broadcast television and video-cassette programmes become contrasting media (Bates, 1988, p.220):

<i>Broadcast</i>	<i>Cassette</i>
fixed time to view	available when needed
ephemeral	repetition/search/mastery
difficult to reflect	analysis/relating/reflection
one speed	individually paced

In other words the method of delivery actually creates a different medium, and makes broadcast television different from video-cassettes. The increasing use of video-cassettes as a method of distribution makes a different learning experience possible. This is true even if the lecture format is retained. Tutored Video Instruction (TVI) involves a lecture being viewed through video-cassette, and a local tutor orchestrating the discussion around it. Such discussion may include stopping the tape at appropriate times and asking about the meaning of the ideas being presented. This makes use of group learning, rather than just a collection of individuals viewing a programme, something suited to both the viewing conditions and the style of programmes often found in China.

The various ways of delivering the television programmes in China (e.g. satellite or microwave broadcasts and video-cassettes) affect student access to the media. Although satellite transmission affords wide geographical coverage, there is the problem of reception. As noted earlier this leads to the occasional use of local re-transmission or,

more commonly, to video-cassette distribution. I will show in Chapter 9 that this results in much duplication of recording and distribution of cassettes, and a reliance on foreign-made equipment. It also leads to the exclusion of individual study because of the lack of private ownership of VCRs.

Quality v quantity

These two criteria for judging the success of a distance learning system (Rumble & Harry, 1982, p.226-36) are to some extent in conflict, as they are in higher education in general (Chapters 3 & 4). In part they represent conflicts of views of the two schools that I have referred to a number of times. On the one hand are those, for example governments, who see distance learning only as a means. It is a means primarily of expanding educational provision, and so for them the concern is with such things as the widening of access, meeting demand, keeping drop-outs low and through-put high, and with a minimum of time to produce a graduate. This is why they use the mass media and use distance learning to overcome the limitations of having insufficient qualified teachers and facilities. They will also associate this with a desire for cost effectiveness. On the other hand there are those who want to promote dialogue, and, in their terms therefore, improve the quality of learning. As pointed out in the discussion on cost effectiveness, moves to improve dialogue that involve more face-to-face tutorial support will increase the cost per student. It is this threat to cost effectiveness that encourages the efforts to create the simulated guided didactic conversation discussed earlier. It also gives an incentive to promote group learning that relies less on an expert teacher and more on interactions among students. So, as with the conventional higher education system, there is the need to ensure both quality and quantity of provision. This tension is evident in the distance learning systems examined in Part 2.

CONCLUDING COMMENT: A BASIS FOR THE EXAMINATION OF DISTANCE LEARNING SYSTEMS

This chapter has established the importance of distance education in China, in addition to its substantial quantitative contribution evident from Chapter 4. The Chinese government has shown its support for distance education, and there are a wide range of distance learning institutions in China contributing to many areas of education. Distance education is therefore important to China, and has to serve the kinds of needs identified in Chapters 3 and 4, but there is a wider international community who have an interest. As I have shown the literature on distance education makes claims for this form of education in fulfilling other needs, for example for access to those who traditionally have not had it. Thus what happens in China is significant to a wider audience. This is emphasized by the international reputation China has amongst adult educators (see Chapter 4), and the hopes that they have for the use of distance education.

There are therefore two sources of criteria for considering distance education in China. Those derived from earlier chapters that reflect the specific needs of China, and those from ideas on distance learning put forward in this chapter. In Part 2 I will therefore use both sets, combining the issues of access, cost effectiveness and learning from this chapter, with those of economic development, satisfying demand, and combining theory and practice, from earlier chapters. There is of course a coincidence over issues such as economic development, but the two sources provide a view of distance education that is of more than of just local concern. Added to this is the fact that in no other country in the world are there such large systems, with an evident variety of target groups, curricula and methods.

In Part 2 the issues from both sources listed above will be used to examine each of the distance education systems, in an effort to determine their development and roles. They will not be applied mechanistically but with due consideration to the peculiarities of each system. In the final chapter I will return to these criteria to give an overview for all of distance higher education.

NOTES

1. Some of this discussion reaches extremes of finesse in definitions, by, for example, distinguishing between distance learning, distance teaching and distance education, the last of which includes the other two (Keegan, 1990, pp.31-2). In general I use them interchangeably.
2. This appears a somewhat peripheral characteristic and when Keegan updated this list the only substantial change was to remove it (Keegan, 1990, p.44).
3. Keegan (1983 & 1990, Chapters 4-6) proposes three schools, those emphasising: independence and autonomy; the industrialization of teaching; interaction and communication. However, the last of these focuses upon Holmberg's and others' ideas of guided didactic conversation (e.g. using a text to simulate a teaching dialogue), and can be included in the industrialized form. This form uses the various media to enrich the interaction and communication.
4. In Chapter 4 I have already drawn attention to the campaigns that formed part of adult education, and in Chapter 2 the non-formal methods advocated by Mao.
5. The most comprehensive review of such frameworks was given by Keegan & Rumble (1982, pp.26-30). Keegan (1990, Chapter 8) uses much the same set in his latest typology of distance teaching systems. These are mainly concerned with the structure of the system. Rumble (1986, pp.15-23) discusses three models of distance education: a systems model, that describes the activities of the system; a transactional model, that focuses on the transactions of various people within the system (e.g. students and tutors); a holistic model that displays the kind of decisions that need to be taken in setting up a system. These cut across the structure and the internal activities.
6. I am using the definition of a system as: an assembly of components (or activities) connected together in an organized way such that the components are affected by being part of the system (and changed when they leave it); carrying out a purpose; identified as a system of interest to an observer.
7. The original description of this sub-system by Kaye (1981, p.20) did not include the study activity, because the sub-systems of concern are operational ones, so that, for example, only the support to student learning (tutors) is included. Rumble (1986, p.17) does, however, include it in his diagram, but not in the accompanying text.
8. I have in fact used the Kaye & Rumble (1981) sub-systems in a previous description of the RTVU (McCormick, 1982), but they only partly relate to the way the RTVU is now developing, and to the other distance learning systems dealt with in Part 2.
9. The Keegan & Rumble typology is of distance teaching institutions and divides them up into autonomous distance teaching institutions and ones that are a mixture of conventional and distance teaching elements (see Figure 5.3).
10. Perry (1986), Daniel (1983), Perraton (1983) and Rumble & Keegan (1982, pp.206-7) give issues that overlap with those of Rumble (1986).
11. Gao (1988) gives this argument for distance education in China, using international comparisons of the number of university graduates per head of population, that put China at the bottom of the league. I have already noted the caution that needs to be exercised in relation to such international comparisons (Chapter 2).
12. In Chapter 2 I have already noted this strange behaviour on the part of the World Bank.
13. An even more stringent test is the cost-benefits of distance education. This is difficult to establish because of the need to identify personal and social costs, and estimate benefits compared to conventional education. For example, graduates of more prestigious (conventional) universities may get better paid jobs, and graduates of distance teaching universities will have a shorter working life, because on average they are older, and hence obtain lower benefits (Rumble, 1988, pp.71-7).
14. In China 'part-time study' is quite rightly called 'spare-time study' reflecting the fact that it is done in a person's own time, not in his or her employer's time.

15. There is considerable controversy about the British Open University's cost effectiveness from which these figures are derived. See Keegan (1990, pp.163-8) for an account of the debate.
16. Freire (1970, p.46) was responsible for the original term 'banking concept' and Young *et al* (1980, pp.6-8) discuss it in the context of the need for distance learning.
17. He Dongchang referred to this in his speech to the first RTVU graduates (*Liaoning guangbo dianshi daxue tongxuan*, No.8, 1982, p.1).
18. During the intense struggles of the Cultural Revolution in 1966 the leadership of the Beijing Television University was accused of trying to mislead students with regard to the nature of the socialist cultural revolution. However, this was through their Bulletin of the Beijing Television University, not the television programmes (*RMRB*, 11 June, 1966; translated in *Survey of China Mainland Press*, No.3723, 22 June, 1966).
19. *WHB*, 7 November, 1979, p.3.
20. There are also two books published on distance education: Distance Higher Education (*Yuan juli gaodeng jiaoyu*) in 1987, and Distance Higher Education Guiding Theory (*Yuan juli gaodeng jiaoyuxue daolun*) in 1988.
21. Howkins (1982) gives a full account of mass communication media in China, though inevitably it is dated now. Yu (1989) has produced a Ph.D. study on television in the post-Mao period.
22. There were estimated to be 260.7 million radio receivers in 1987 (Xie, 1988, p.16). In fact I have no figures for radio reception, but given the use of extensive microwave, satellite and hard-wired transmission (and re-transmission) it seems a fair guess that it is almost blanket.
23. *SWB FE/W0161 A/4*, 9 January 1991.
24. Gao (1991) gives the most recent account of the development of the satellite system.
25. *ZGJYB*, No. 608, 11 October, 1988, p.4. Since that date the transmissions have been indicated as 'trial broadcasts'.
26. Interview at CRTVU 17 May, 1990. Gao (1991, p.58) says that a third channel will be added during the period of the Eighth Five-Year Plan.
27. I have no systematic evidence of this, only my observations in various cities in China. For example, Anhui Provincial Television has an English language programme at around 6pm each day. Local stations may of course broadcast their PRTVU programmes (CRTVU, undated, p.18).
28. However, a later report put the figure for both ground stations and reception centres as 22,139 (*SWB FE/W0161 B/1*, 9 January 1991). There are clearly some definitional problems because Gao (1991, pp.56-7) says that in 1990 there were 600 'relay stations' and 4,000 'receiving (only) stations'.
29. In my visit in 1990 I was unable to receive the CRTVU programmes outside Beijing, even in cities such as Nanjing and Hangzhou.
30. In Hubei 97.4% of rural townships have one-day mail services (*SWB FE/0903 B2/1*, 24 October 1990).
31. Staff at the CRTVU told me of a mailing they were forced to make of late material to over a hundred thousand students. It was only a slim volume of supplementary material, but it took several days to clear! As Chapter 7 shows central correspondence education institutions suffer such problems.
32. The *People's Daily* is compiled centrally and sent by the microwave telecommunications system to local printing centres to cope with the same kind of distribution problem.
33. There have indeed been considerable improvements in quantitative terms with it becoming more common for households to have their own private telephone, but again this is an urban phenomenon.

34. Howkins (1982, p.90) also says that China has difficulty manufacturing the heavy duty paper necessary for colour printing.
35. There are complaints about distribution in rural areas, which consequently only account for 10% of sales (SWB FE/1054 B2/7, 24 April 1991).
36. In Nanjing in the special higher education bookshop (the only place that I found CRTVU texts on sale) there were only some 30 titles out of a total of 400 claimed by CRTVU to have been produced. In Beijing even at the main Xinhua Bookshop in *Wangfujin* (a main street) no CRTVU books were on display. The Higher Education Publishing House bookshop in Beijing had only a few.
37. There is also a general problem in obtaining academic books. The boom in publishing in the post-Mao era, and the increase in commercial profit-making operations, has meant that many bookshops are not interested in stocking academic books.
38. Student interviews in Foshan Branch School, Guangdong PRTVU, 23 June 1983.
39. The figures for washing machine and refrigerator production are shown in Table 5.3.

Table 5.3: washing machine and refrigerator production (millions)

<i>Year</i>	1982	1983	1984	1985	1986
<i>Washing machines</i>	2.533	3.6	5.78	8.87	8.99
<i>Refrigerators</i>	0.0999	0.188	0.4	1.45	2.24

At a time when television ownership per household in Beijing was 9% refrigerator ownership was 7%. Thus such labour saving consumer durables were not universal even in Beijing.

Sources: 1982 - *State Council Bulletin*, No.11, 1983, p.500; 1983 - *State Council Bulletin*, No.9, 1984, p.291; 1984 - SWB FE/7900/C/4, 15 March 1985, SWB FE, 29 February 1984; 1985 & 1986 SWB FE/8500/ C1/3, 24 February 1987.

40. Interview with Huang Fenggeng, of the Zhejiang Provincial Education Commission's office for self-study higher education (9 May 1990).
41. The Ministry of Education has in the past issued a global timetable for examinations for all provinces, but this does not give specific course examination details (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, p.329).
42. The nationally set specialities were issued by the Ministry of Education and gave details of the courses and their credit worthiness along with reading lists for each course and the years that examinations were to be offered for the courses included in the plan (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, pp.22-99, 103-135, 144-204, 217-244).
43. In Beijing it is claimed that the minimum is one and half years (ZGJYB, No.922, 27 October 1990, p.3).
44. This section is based on interviews at the Television Teachers' College on 18 May, 1990, unless otherwise stated.
45. This College does not have the sole task of carrying out the inservice training of teachers. As I will show in Chapter 7, correspondence courses provided by the teacher training (normal) universities currently provide the bulk of this training. There are, however, provincial differences as Chapter 9 illustrates.
46. These points on the role of distance learning and inservice training were also made by Mr. Wang of the State Education Commission. A report of a conference on the Television Teachers' College noted that the College added to the capacity of the system, arguing that using conventional and correspondence education methods would require 19-29 years to complete the training for the nine-year compulsory

education. The Television Teachers' College could do it more quickly, cheaply, and with better quality and convenience for the student (ZGJYB, No.689, 25 April 1989, p.1).

47. The information on use of video tapes was given by staff at the Zhejiang Audio-visual Centre (interviews 14 May 1990). See Chapter 9.
48. ZGJYB, No.689, 24 April 1989, p.1.
49. These course requirements for primary and secondary teachers are reproduced in *Guan* (1989, pp.117-135); they were actually laid down in the early 1980s by the then Ministry of Education.
50. The information in this section is taken from *Guan* (1989, pp.608-9), and Zhou (1988a).
51. This information is taken from page 4 of the following issues of ZGJYB: No.485, 22 December 1987; No.608, 11 October 1988; No.932, 20 November 1990.
52. This interest is manifest mainly through audio-visual education in conventional institutions and has led to a national network of school and colleges (SWB FE/8375/BII/2-3, 27 September 1986). This is accompanied by audio-visual centres, which I will discuss in Chapter 9. These centres deal with conventional and satellite television education. There is also a bi-monthly magazine *Audio-visual Education* (*Dianhua Jiaoyu*) published by the National Audio-visual Education Centre.
53. On an anecdotal level I have experienced this when travelling with Kate Flower, the British presenter of the *Follow me* English language series. People would come up to her and say "I am one of your students", meaning that they learnt English from the *Follow me* television programmes.
54. This is a point recognised by Keegan (1988, p.5) citing Dieuzeide (1985). Daniel (1988, p.27) notes that there are limits to distance learning; it cannot change values and habits of a nation in a short time - it is an evolutionary, not a revolutionary approach.
55. Daniel cited in Keegan (1990, p.92) sees three sources of distance learning systems, one of which is a long tradition of independent learning.
56. It is important to realize that television has other uses unconnected to learning, such as providing a public image for the distance learning system.
57. There is an unfortunate translation that is commonly used in China that adds to the confusion: 'radio' is *guangbo*, which literally means 'broadcasting'.
58. It is also true to say that the requirements of the State Education Commission for course teaching hours for recognised qualifications (e.g. diplomas) force the CRTVU, for example, to have enormous numbers of programmes. Given the limited resources available 'lectures' are the obvious response.

CHAPTER SIX THE RADIO AND TELEVISION UNIVERSITIES

Chapter 4 has already looked at the general contribution of distance learning to the needs of the economy and to satisfying demand for higher education, and in this chapter I want to look at the particular role of the Radio and Television Universities (RTVU) within the higher education system in China. To provide the basis for an examination of the role of the RTVU it is necessary to look at the development of the system and its promise as a distance learning system. This development has been characterized by changes on a number of fronts, that of its structure, programmes of study, numbers of students on these programmes and how the courses and media of teaching are delivered to students. The changes in structure and course delivery have been relatively evolutionary, but those in the programmes and student numbers have been more dramatic, reflecting the course of government policy.

The examination of the promise of the RTVU will be based upon the promise of distance learning outlined in Chapter 5 in terms of learning, access, economic development, and cost effectiveness. These headings incorporate the requirements of the needs of the Chinese economy (as discussed in Chapters 3 & 4) as well as the hopes of advocates of distance education. The chapter will therefore be in three parts: development of the RTVU, its promise as a distance learning system and finally a summary of its role in Chinese higher education.

THE DEVELOPMENT OF THE RTVU

Structure of the RTVU

In this section I will examine the structure of the RTVU to show how it is changing. In particular I will show that the Central Radio and Television University (CRTVU) is diminishing in importance, as a result of government regulations issued in 1988 and developments in the Provincial Television Universities (PRTVUs), and that this represents a shift to local levels of control. The structure of the RTVU has always been one of distributed responsibility, rather than totally centralized or decentralized. I start by

examining this, before going on to consider the changes the 1988 regulations are bringing and the collaboration among RTVUs that is indicative of the diminishing role of the CRTVU. The change in structure has implications for what kind of model of distance learning system is appropriate to describe the RTVU, and I will try to characterize this using the models in Chapter 5.

Distributed responsibility

Figure 6.1 (overleaf) shows the structure of the RTVU.¹ There are two parallel lines of authority, one running through the main-stream educational administration system, and the other through the RTVU system. The former bears the main responsibility and control, and the latter mainly guidance, as the two kinds of lines (solid and broken respectively) indicate. There is also a third vertical structure formed by the use of the RTVU by large industries, but this really only takes effect at lower levels. The RTVU system can also be thought of as a series of discontinuous levels, as shown in Figure 6.2, with the main connections within (rather than between) each of the levels. As the draft regulations governing the RTVU, issued by the State Education Commission (16 May, 1988), put it: "It [RTVU] is a distance education system which is planned as a whole and which runs its educational work at separate levels and is managed at separate levels." (Guan, 1989, p.303.) However, there are vertical strands that exert academic control (dotted lines in Figure 6.1) through the RTVU system and various industries, such as steel, mining and light industry (the latter is the industry shown in Figure 6.2 - p.148).

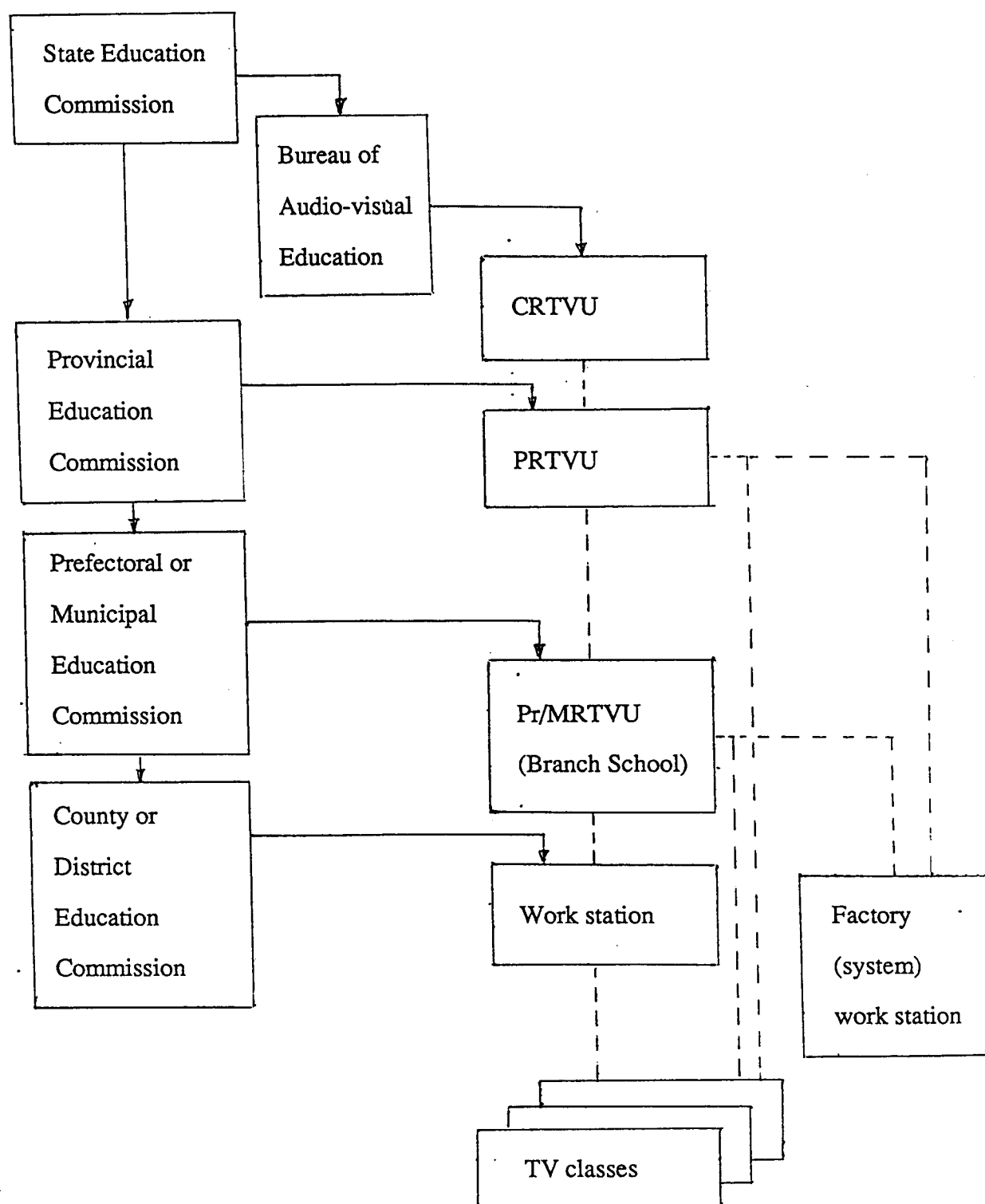


Figure 6.1: the structure and connections of the RTVU system²

Figure 6.2: the RTVU represented as a series of discontinuous levels

Level	Education system	RTVU system	Industrial system
National	SEC --- BAVE -----	CRTVU	Min. L Ind.
Provincial	PEC -----	PRTVU	P L Ind B
Prefecture/ Municipal	P/MEB -----	Pr/MRTVU (BS)	
County/ District	C/DEB -----	C/DRTVU	(Factory) WS SWS
TV classes			
<div>Key SEC: State Education Commission BAVE: Bureau of Audio-Visual Education CRTVU: Central Radio & Television University Min. L Ind.: Ministry of Light Industry PEC: Provincial Education Commission PRTVU: Provincial Radio & Television University P L Ind B: Provincial Light Industry Bureau P/MEB: Prefecture/Municipal Education Bureau Pr/MRTVU: Prefecture/Municipal Radio & TV University BS: Branch School (of RTVU) C/DEB: County/District Education Bureau C/DTVU: County/District Radio & TV University WS: Workstation SWS: System Workstation</div>			

Each level of the education system (national, provincial, prefecture etc.) controls the corresponding level of the RTVU system (e.g the Provincial Education Commission (PEC) controls the PRTVU). Such control includes finance, the establishment of branch schools (and workstations) and of new specialities. However, the provincial government, through the PEC, gives final approval where this is necessary (e.g for a new speciality) to all levels below it, and the level above has to record the approval. Thus a county RTVU would have to submit proposals for a workstation in the area to the county education

bureau, but approval comes from the PEC, with it being reported to the prefectural level bureau. Control resides within the local government system, not the RTVU, and therefore makes the PRTVU, Municipal Radio and Television University (MRTVU), and the branch schools very much the 'property' of local government.

The links within the RTVU system are shown in Figure 6.3 along with the functions carried out by each level.³ In addition to those functions shown in this figure, the CRTVU and PRTVUs also carry out research and each level is responsible for guiding the educational professional work of the level below it. Political and ideological work (including courses) is carried out at the level of a workstation or branch school, and only guidance is offered from the levels above (including CRTVU). This makes such work a purely local responsibility, even when it is part of the courses of a speciality.

	<i>CRTVU</i>	<i>PRTVU</i>	<i>BS</i>	<i>WS</i>
<i>Academic guidance</i>	Credit policy Speciality and course plans	Approve academic plans	Organize local sp. & courses	Run local courses
<i>Exams</i>	Set questions and marking guides	Organize marking Award qualification	Organize exam	Run exam
<i>Student records</i>	none	For award of qualification	For credits	Full records
<i>Material provision</i>	Produces TV and texts etc.	Distributes and produces	Distribut. to WS	Distribute to students
<i>Training</i>	PRTVU staff	BS staff & tutors	none	none
<i>Teaching functions</i>	none	*	Org. & support WS	Org. students & their work Employ tutor Resp. for plant

* PRTVUs can run TV classes

Figure 6.3: links and responsibilities within the RTVU system

The 1988 regulations

The State Education Commission issued draft regulations in 1988.⁴ These formally changed the relationship of the CRTVU to the rest of the system by giving more autonomy to the PRTVUs. Thus PRTVUs were enabled to set up new specialities in addition to those offered by the CRTVU, although in fact some had been doing this for at least three years previously (*Xie & Li*, 1990). The CRTVU offers guidance on academic policy in this area, but, as noted above, it is the provincial government that gives approval and authority for establishing new specialities. This is mirrored by the increase in the production of teaching materials, both television and print, by PRTVUs which will satisfy both the needs of local specialities, and perhaps of nationally provided ones.

The thrust of this growing independence is part of the desire of provinces, and lower levels of government, to control their local educational provision to suit their needs. Indeed the setting up of the Provincial Education Commissions was to encourage co-ordination at this level to improve provision, and they are trying to exert their authority. This is especially so in the case of the use of expensive media such as television, as I will show in Chapter 9.

Intra-PRTVU collaboration

Cutting across a simple centre-periphery conflict between the CRTVU and the PRTVUs is the collaboration among PRTVUs, that is taking place without going through the CRTVU. PRTVUs collaborate in course provision, and now Jiangsu PRTVU has a project to enable PRTVUs to start joint ventures.⁵ The provision of full studio facilities for nine PRTVUs (and to a lesser extent to nineteen other PRTVUs) by the World Bank Project (Hawkrige, 1990, p.13) has enabled this independence from the centre and the possibility of collaboration among PRTVUs.

This collaboration makes obvious economic sense in using the very large television production capacity⁶ and in capitalizing on the different expertise that exists in the various PRTVUs. But it also appears to reflect some irritation with the CRTVU on the part of PRTVUs. Whether this is because the latter feel they are equally able to make

programmes, but prevented from doing so by the CRTVU, or because of the usual animosity between provinces who want autonomy from central authority I cannot tell.⁷

Another example of collaboration among PRTVUs is the setting up of an association for distance education research. This was chaired by the former President of Jiangsu PRTVU in 1990, with its Vice-President as its vice-chair.⁸ Thus even in the field of research, a function so far best developed by CRTVU, the PRTVUs may form a link that reduces the need for the CRTVU.

The distance learning model

As Chapter 3 has shown this is by far the largest of the distance learning systems for which statistics are regularly collected by the State Education Commission. This size is reflected in the number of branch schools (497), workstations (1550), and TV classes (27,000) (CRTVU, undated, p.11). Such a size, and the resulting magnitude of organizing and managing the system, makes it unlikely that a classical centre-periphery model (see Table 5.1) could be adopted as a structure. The structure of a central materials production with local administration dealing with a range of functions in addition to academic ones, does not correspond to a strong centre (CRTVU) directly controlling a subservient periphery (PRTVUs etc.). In this sense it is like the 'associated centre model' but with student administration, in addition to finance and student support, being controlled at the local level. But this is not quite adequate to describe a system where major decisions about student numbers, and more recently the academic programme, are taken away from the centre. It appears, therefore, to be moving towards the 'dispersed centre model' where an autonomous central institution (CRTVU) co-operates with a variety of institutions (PRTVUs). Even this characterization is not adequate. Firstly CRTVU, in some areas of activity (e.g. nationally provided specialities and examinations), does more than co-operate, it directly controls.⁹ Secondly, despite this specific control it has little autonomy as an institution. This is partly because it controls so few elements of the system, and partly because like many institutions in China under central government there is little room for autonomy. Thirdly, the PRTVUs are increasingly asserting their more important position in the system, through collaboration.

Both the conflict of central control and local autonomy, and the collaboration among PRTVUs could threaten the role of the CRTVU. If the CRTVU withers through a diminishing of its functions, including the most important one of material production, then the whole system will change in nature. This would create a new model to add to those of Neil (Keegan, 1990, p.120), discussed in Chapter 5 (Table 5.1), one that I would call the 'associate system model'. This is characterized by an association of distance learning *systems* (e.g. PRTVUs) that each have their own autonomy. I have deliberately used the word 'system' because even within a PRTVU the structure is not that of a single 'institution', but a collection of institutions that make up a cohesive system.

Programmes, student numbers and delivery

In this section I want to examine the development of the RTVU in terms of its programmes of study, the student numbers and the way it offers its courses (course delivery and audio-visual facilities). This will provide the data to examine, in the second part of the chapter, its contribution to higher education and in particular how it makes up for the failings of the conventional system of higher education. Chapter 4 has already shown how its contribution to diploma qualifications has declined and I want to look at this in more detail and to show how the RTVU has been redirected towards programmes more in keeping with government policy.

Programmes of study

The academic programme of the RTVU has several components: specialities laid down by the CRTVU; specialities laid down by the PRTVU, and courses within each of these specialities laid down by the branch school or workstation.¹⁰ The bulk of the courses on offer are those determined by the CRTVU and supported by television programmes, texts and assessment produced at the centre. The growth of CRTVU programmes of study has been steady, with an initial concentration upon diplomas (*zhuanke*) in science and technology, followed by the introduction of humanities and then economics and management specialities. In more recent times, in keeping with government policies outlined in Chapters 3 & 4, continuing education, inservice education, and vocational secondary education have been developed as part of the programmes of study. This is a

change that is not altogether supported by the staff of CRTVU.¹¹ Table 6.1 (overleaf) shows the CRTVU specialities offered over the first ten years of its life (from *Xie & Li*, 1990, p.6).¹²

The striking feature of this table is the irregularity of the presentation of diploma specialities. This is in part caused by limitations in television transmission time (that I will discuss in the next section), but is also a response to the needs of the country. However, the presentation of a course only once, as was the case with the 'Management' speciality in the 'Engineering and Science' diploma programme, is not an economical use of distance learning resources. For example, the large investment in production resources for television programmes requires repeated presentations for maximum benefit. The World Bank Project evaluation explains the dropping of such specialities as being because demand for graduates had been satisfied or some other provision had been made to replace the RTVU's offering (Hawkrige, 1990, p.22).¹³

The inservice and continuing education courses are not only a general response to government policy and the needs of the economy, but in some cases are commissioned by certain professional bodies or national ministries.¹⁴ Such commissioning means that the body concerned determines the curriculum and hence recognizes the qualification. This helps to match employers needs to the courses being offered.¹⁵ Inservice courses are short, aimed at upgrading professional skills or qualifications and are studied full- or part-time. Continuing education courses are similar to inservice but are aimed at those who have already had higher education but who need to be improved and updated.

Table 6.1: CRTVU award-bearing courses 1979-88

Programme	Faculty	Specialization	Started	Year of Presentation										
				1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	
D I P L O M A S	Engineering	Teacher Training	1982			*		*						
		Mechanical	1979	*	*		*	*		*	*			
		Electrical	1979		*		*	*		*	*			
		Light Industry & Chemical	1984					*		*	*			
		Civil	1984					*		*	*			
		Engineering	1984					*		*	*			
		Applied	1986							*	*			
		Computing	1986											
		Management	1984					*						
		Humanities	Chinese Lang. Literature	1982			*			*	*	*		
S	Economics and Management	Law	1985						*	*	*			
		Journalism	1985						*	*	*			
		Library and Archival Science	1985						*	*	*			
		Political Cadre Special Course	1984						*	*	*			
		Banking	1983				*	*		*	*	*		
		Statistics	1983				*	*		*	*	*		
		Management	1983				*	*		*	*	*		
		Finance	1983				*	*		*	*	*		
		Taxation	1983				*	*		*	*	*		
		Fish Farming	1988									*		
Secondary Vocational	Engineering	Animal Husbandry	1988									*		
		Civil	1986							*				
		Accounting	1987							*				
		Banking	1987							*				
		Procurement	1988							*				
		Librarianship	1988							*				
		Foreign	1988							*				
		Economics and Trade	1988							*				
		Engineering	1979	*	*									
		Physics and Mathematics	1979	*	*									

The development in 1988 of two agriculture specialities within the diploma programme reflects the growing concern for rural education, that I noted in Chapter 3 (p.34). But this concern had been manifest through the traditional diploma specialities before the introduction of the agriculture courses. In both Jiangsu and Zhejiang rural areas have been a target for development. In Jiangsu the needs of rural industry for engineers and technicians led the provincial government to decide in 1984 that the PRTVU should expand into rural areas with its existing programmes.¹⁶ Even in 1982 every county in Jiangsu had a workstation, and PRTVU graduates from rural areas made up 30% of the total in 1990. In Xiaoshan (Zhejiang) two-thirds of industrial output is from rural areas and so the mechanical engineering specialities that already exist are important to the development of these areas.¹⁷ Outside the existing diploma programme courses specifically on agriculture have been made to suit local needs. For example, Zhejiang PRTVU has made television programmes on rearing rabbits. Some courses are based upon existing PRTVU courses although they may have different content to make it fit local requirements, but of course this is not likely to be a distance learning course with centrally produced material.

Chapter 5 has already outlined the 'Prairie Fire School' (*Liaoyuan Xuexiao*) for which the CRTVU is now responsible. This represents a more radical development of the RTVU system to suit rural areas, and although the programmes will not be created by CRTVU staff, they will place a considerable burden on them. At the provincial level it will create even more burdens as it involves a student body with quite different educational levels and access to facilities than the RTVU system has been used to.

Some PRTVUs have run secondary vocational (*zhongzhuan*) education programmes since 1979 (not 1982 and 1983), but, as I will show later, it was not until 1986 when the national programme was established that significant numbers of students were recruited.¹⁸ The requirement for entry to the programme is junior middle school graduation, and both adults and 14-15 year-olds can enter. The programme is three years of full-time study.

In recent years a number of PRTVUs have produced their own specialities, in addition to those from CRTVU. Table 6.2 shows those PRTVUs with the highest number of

specialities offered in 1988; most of the ones additional to CRTVU specialities were in the area of Economics and Management (Xie & Li, 1990, p.29). Some PRTVUs indicate in their course admission statistics that certain specialities have been established locally, but most do not. This growth in local specialities is indicative of the increase in autonomy of the PRTVUs and of their capacity to produce the teaching material supporting them. However, there seems to be no relationship between those PRTVUs that have broadcast-quality television facilities and those that have a large number of locally produced specialities.¹⁹

Table 6.2: PRTVUs with highest number of specialities offered in 1988²⁰

	Hebei	Guizhou	Zhejiang	Anhui	Hunan	Yunnan
No.	25	37	24	24	41	21

The purpose of local specialities is two-fold, firstly to allow PRTVUs to meet their local needs for graduates, and secondly to distribute the material production load around the whole system. Originally the idea of having local *courses* (not complete specialities) was to allow branch schools and workstations to meet the specific needs of their students. CRTVU laid down an upper limit of 10% for the proportion of local courses that made up a particular diploma speciality. This has now developed to the level of a PRTVU offering whole specialities, the television programmes of which may be broadcast within the PRTVU in question or to all PRTVUs through national transmission. There are a number of economics and management and humanities specialities that come into this latter category.²¹ Thus, for example, Jiangsu PRTVU in connection with Zhejiang PRTVU produced a course on tourism English, a specialism of particular relevance to these two popular tourist spots.²² Given the strength of the English Department in Jiangsu PRTVU it has also produced specialities in English for secondary school teacher training and business English. Indeed such courses based on local expertise can be used to supplement CRTVU's academic staff.²³

All specialities contain an element of political education, but such courses are part of local provision. There are, for example, no television programmes for these courses and they are organized at the level of the workstation. Political education appears to be much the

same as for conventional higher education and was increased in the same way in the aftermath of the Tiananmen Square incident.²⁴

Student numbers

The variation in student numbers illustrates graphically the changes the RTVU has experienced. There exist a number of problems that must be borne in mind when quoting statistics for the RTVU. The first problem in discussing student numbers is that global figures, such as those used in Chapter 4, do not always make clear the different categories of students. There are *full-time* students, who can be workers released from their employment to study; these have in the past represented the bulk of students, though currently this is changing as I will show shortly. Full-time students take three years to complete a diploma. There are also *part-time* students who obtain some release from work for one or more days a week; they can study for a two- or three-year diploma, but must finish it within six years.²⁵ However, numbers of these students have not to my knowledge ever been issued. There are also self-study students who study in their *spare time* for both types of diplomas and must complete them in ten years. Figures for these are quoted and I will consider them in detail below. Finally there are what are called *single course* students, i.e. those that only study for a single course, rather than a qualification such as a diploma, although they can accumulate these over six year to get a diploma. These are quoted separately but the overlap with the self-study students and part-time students is not at all clear. The second problem concerns the non-uniform system of compiling statistics in the RTVUs. Indeed the lack of a standardised system of student records led the World Bank Project evaluation report to make a recommendation for such a system based on standard microcomputer hardware and software (Hawkrige, 1990, p.33).²⁶ This lack of a standard system leads to an inconsistent and unhelpful reporting of figures for students, such that it is not always possible to be sure what they include.²⁷

When figures are disaggregated, and made as consistent as possible, some trends become apparent. Appendix 3 gives such figures, derived from the CRTVU publication of the PRTVUs figures (Xie & Li, 1990).²⁸

Figures 6.4 & 6.5 (pp.159 & 160) illustrate the trends in admissions to diplomas, and they indicate an irregular pattern of intake both overall and for each of the major subject areas. The 'Engineering and Science' specialities have suffered a steady decline (apart from the 1984 figure)²⁹ and the figures for more recent specialities show a decline from the initial levels when the specialities were first introduced.³⁰ The total admission figures have hovered around the 200,000 mark (apart from the 1985 figure when large numbers were admitted to 'humanities' courses)³¹ The recent decline in diploma programmes, shown in Chapter 4, but not yet evident in Figures 6.4 & 6.5, is reflected in the 1990 admission figure of 93,000 which is the lowest of the annual figures since 1979 (aside from the exceptional year of 1981).³² CRTVU certainly acknowledge a reduction in demand, along with the change on the part of the State Education Commission to emphasise continuing education and inservice courses rather than those that lead to a diploma.

The data for diploma graduations by faculty and in total are illustrated in Figures 6.6 & 6.7 (pp.161 & 162).³³

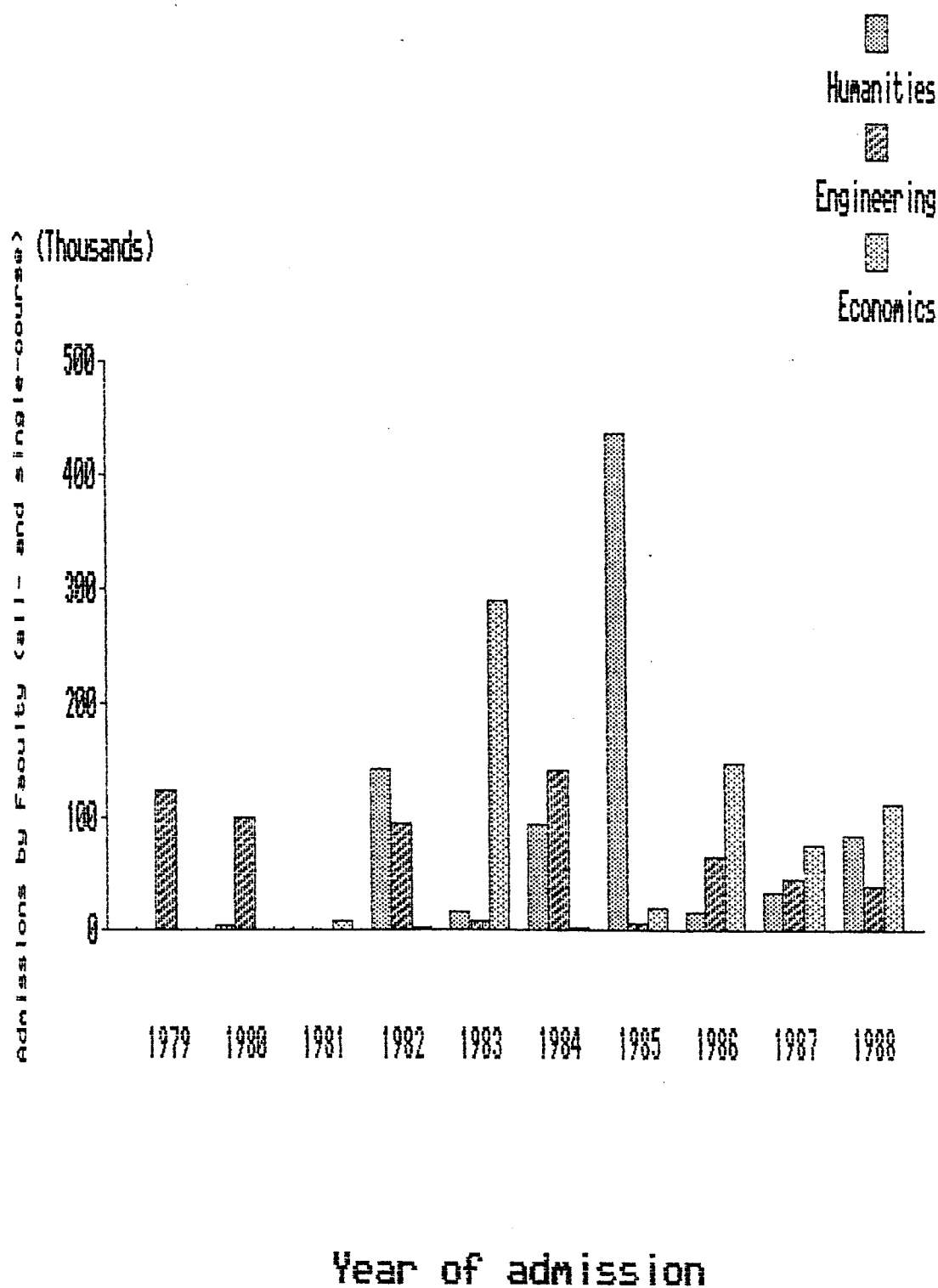


Figure 6.4: RTVU student admissions for all faculties

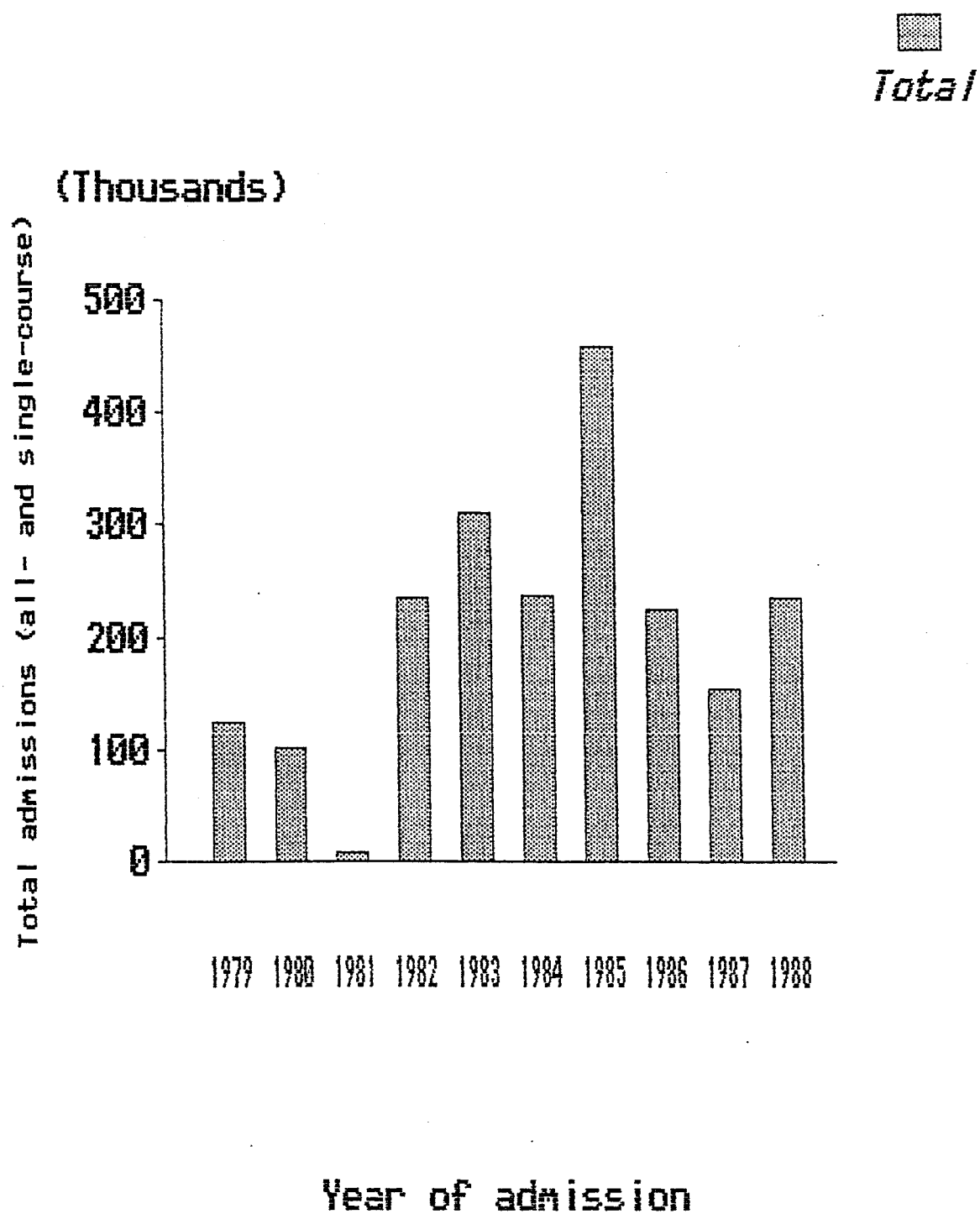


Figure 6.5: RTVU total student admissions

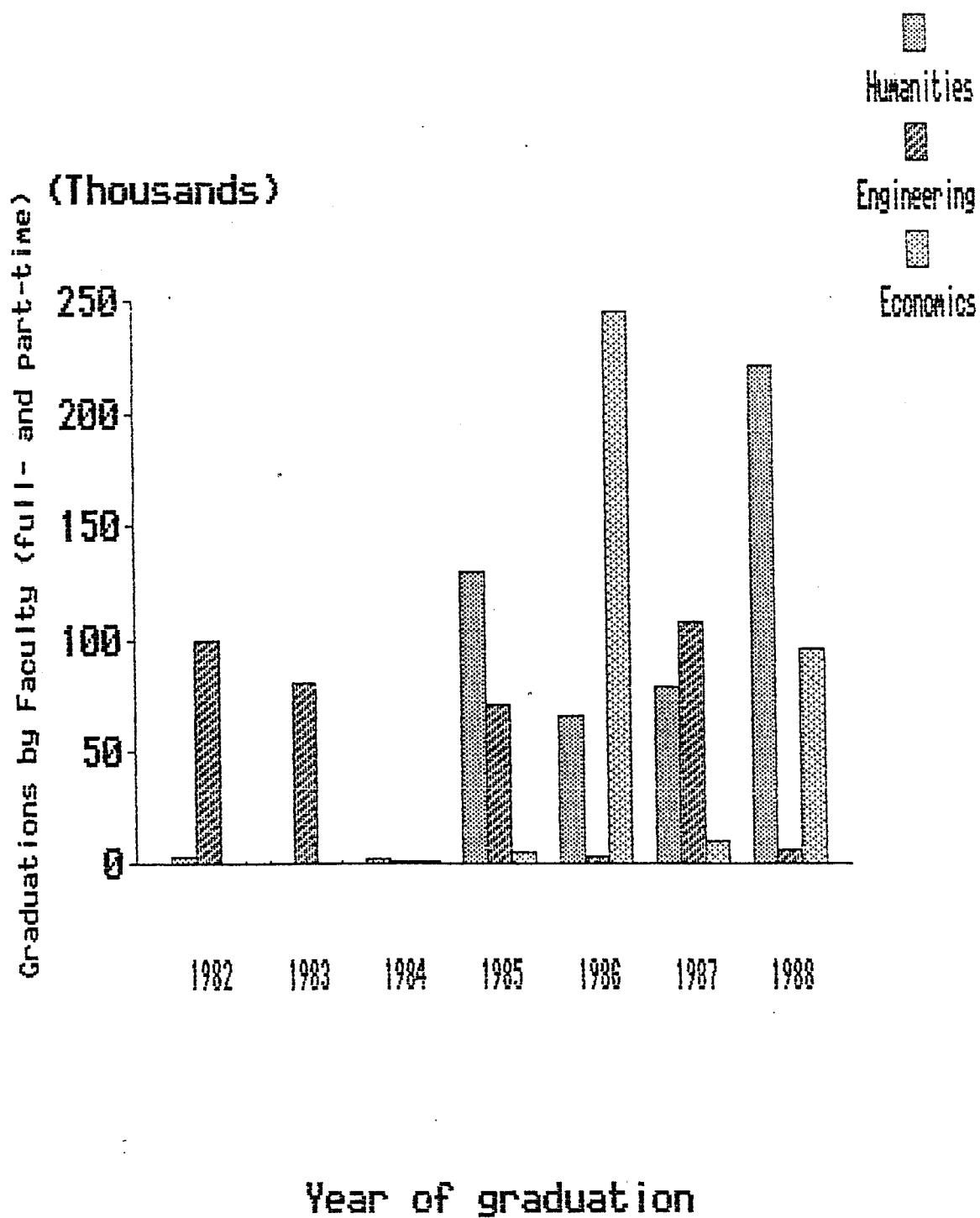


Figure 6.6: RTVU graduates for all faculties

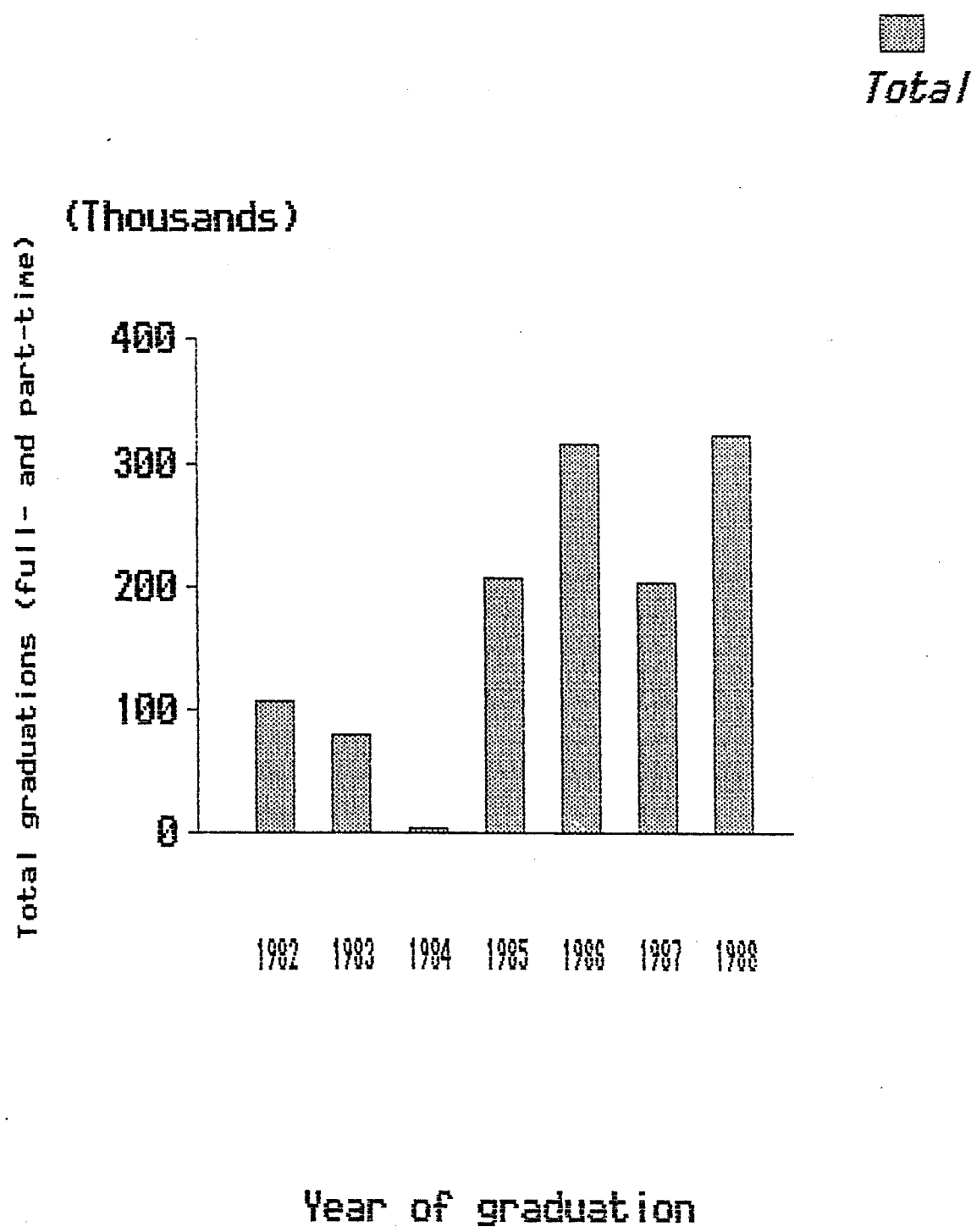


Figure 6.7: RTVU total graduates

The overall impact of the irregular pattern for admissions and graduation, noted above, is of a lack of continuity with large variations in the number of students entering and leaving the RTVU. Up until 1985 this was caused by the limitations in available television transmission times on the microwave network. Thus in 1981 a new intake of engineering and science students could not be admitted because the air-time was full transmitting courses for the second and third year of the 1979 and 1980 intakes respectively. When the economics and management specialities were introduced in 1983 they took up the available transmission time for an engineering and science intake. Similarly in 1985 when the new humanities specialities were introduced the intakes of both engineering and science, and economics and management specialities, were affected. (See Table 6.1 for the phasing of the introduction of the various programmes.) In the years after 1986 when the satellite was in place, transmission time became less tight, but there was still considerable variation in both individual subject intakes and of total intake. Such fluctuations present problems for any institution, but for a distance learning institution they make planning very difficult and threaten the cost effectiveness.

It is important to remember that the national statistics aggregate hundreds of decisions about what specialities are going to be offered at the level of individual branch schools and workstations. These decisions are then superimposed upon the major decisions about the introduction of new specialities and about increased transmission time. Also in different provinces the RTVU is looked upon in a variety of ways depending upon the conditions in each province, and in Chapter 9 I will illustrate this local context for the province of Zhejiang.

Now let me turn to the other two groups, namely school leavers and self-study students. School leavers are those students who pass the conventional higher education entrance examination but who are not able to get into conventional higher education (CRTVU, undated, p.17), and who are "awaiting employment", i.e. unemployed. They study full-time with the RTVU, but do not have any employment guarantee after graduation, as is the norm in the conventional sector. As noted in Chapter 4 (p.94), since 1983 there has

been government encouragement to accept school leavers, but it was not until 1986 that officially they were admitted, as Table 6.3 indicates.

Table 6.3: RTVU admission figures for school leavers and percentage of total admissions³⁴

<i>Year</i>	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
<i>Number</i>	550	8993	0	991	3188	8031	7883 ³⁵	35527	35949	38630
<i>% of total</i>	0	9	0	0	1	3	2	16	23	16

These figures show a slight increase in absolute numbers over recent years,³⁶ and Table 4.13 has already shown a decline by 1990 in total numbers entering the distance learning systems. This decline, and the variation in proportions of total admissions (see Table 6.3), reflects some of the problems associated with the registration of school leavers.³⁷ First, the fact that they do not have any job allocation is a disincentive to potential students and a worry to RTVU staff. In some areas, for example Jiangsu and Zhejiang, school leavers are contracted to local employers to whom they go after graduation.³⁸ The second set of problems are more unusual in that they give rise to concern in the Ministry responsible for grain and in the Public Security department. Many of these school leavers come in from the rural areas and pose a problem of rights-to-residence in urban areas (where the RTVU is mainly located). They also need a grain allocation from urban authorities, something they do not need in the countryside. In May 1990 the CRTVU was unsure as to whether school leavers would continue to be admitted.³⁹ Despite these difficulties school leavers have represented a significant proportion of the RTVU student body. Within the RTVU they represent a higher proportion than the 6% for adult higher education as a whole (see Chapter 4).

Self-study students in the RTVU are those who do not register with the PRTVU or Branch School, but are "free viewers" (*zixue jianting sheng*) to use the term in use within the RTVU. They obviously must register to take the examination, but otherwise study on their own. They represent about 6% of the total 'admissions', and most of these actually come from Zhejiang PRTVU.⁴⁰ In 1985, when many PRTVUs were allowing self-study students to take part in the RTVU Zhejiang accounted for some 72% of the total national

figures, but since that date it has accounted for about 100%. This is because the State Education Commission does not now allow PRTVUs to admit self-study students, but Zhejiang has managed to ignore this order and hence is the only PRTVU with such students.⁴¹ Although as a general total they are not a significant proportion of RTVU students, their exclusion conflicts with an important principle of openness that I will take up later in this chapter.

Single-course students may not be a separate group, but could be made up of those who are self-study students.⁴² Because of the confusion of reporting it is not possible to show definitively that there is now a trend of a shift from full-time to part- and spare-time study as is reported, but what few statistics there are tend to confirm these reports.⁴³ Whether such figures are for 'single-' or 'all-course' students is not clear.

The decline in diploma students is compensated for by an increase in inservice and continuing education course enrolment. Figure 6.8 (overleaf) shows that there is an increase in the number of students although it is consistent only for inservice (*gangwei peixun*) and professional certificates (*zhuan ye zhengshu*).⁴⁴ But given the potential variation in the nature of these courses, and the fact that many might in fact be conventional ones laid on by the local branch school or workstation, it is difficult to give any particular significance to the very large numbers.⁴⁵ These programmes, along with secondary vocational courses, represents the future growth area for the RTVU.

Students on secondary vocational courses have increased since the government stressed this policy for education in general (see Figure 6.9, p.167). The statistics in Appendix 3 that are the basis for Figure 6.9 appear to be for adults only and when school leavers are added the figure for admissions doubles.⁴⁶ This large proportion of junior middle school leavers could have a significant effect on the nature of the RTVU, more so than those in the diploma programme, because the total numbers in the secondary vocational programme are very much higher.⁴⁷

The student numbers therefore show the change from diploma courses to non-diploma and secondary vocational courses. But for all the programmes there are massive swings in numbers that will have caused problems for the RTVU.

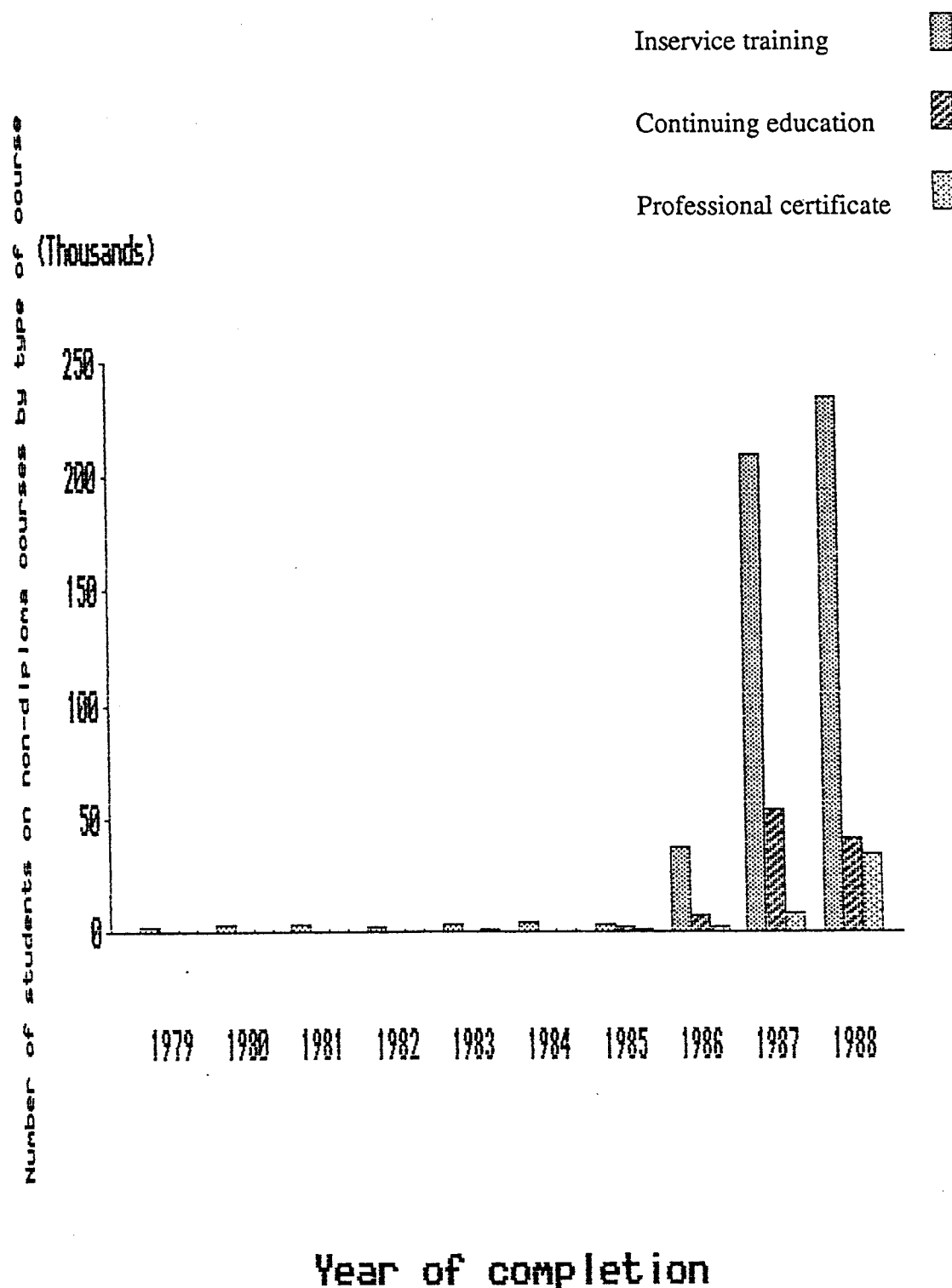


Figure 6.8: RTVU student enrolments in non-diploma courses

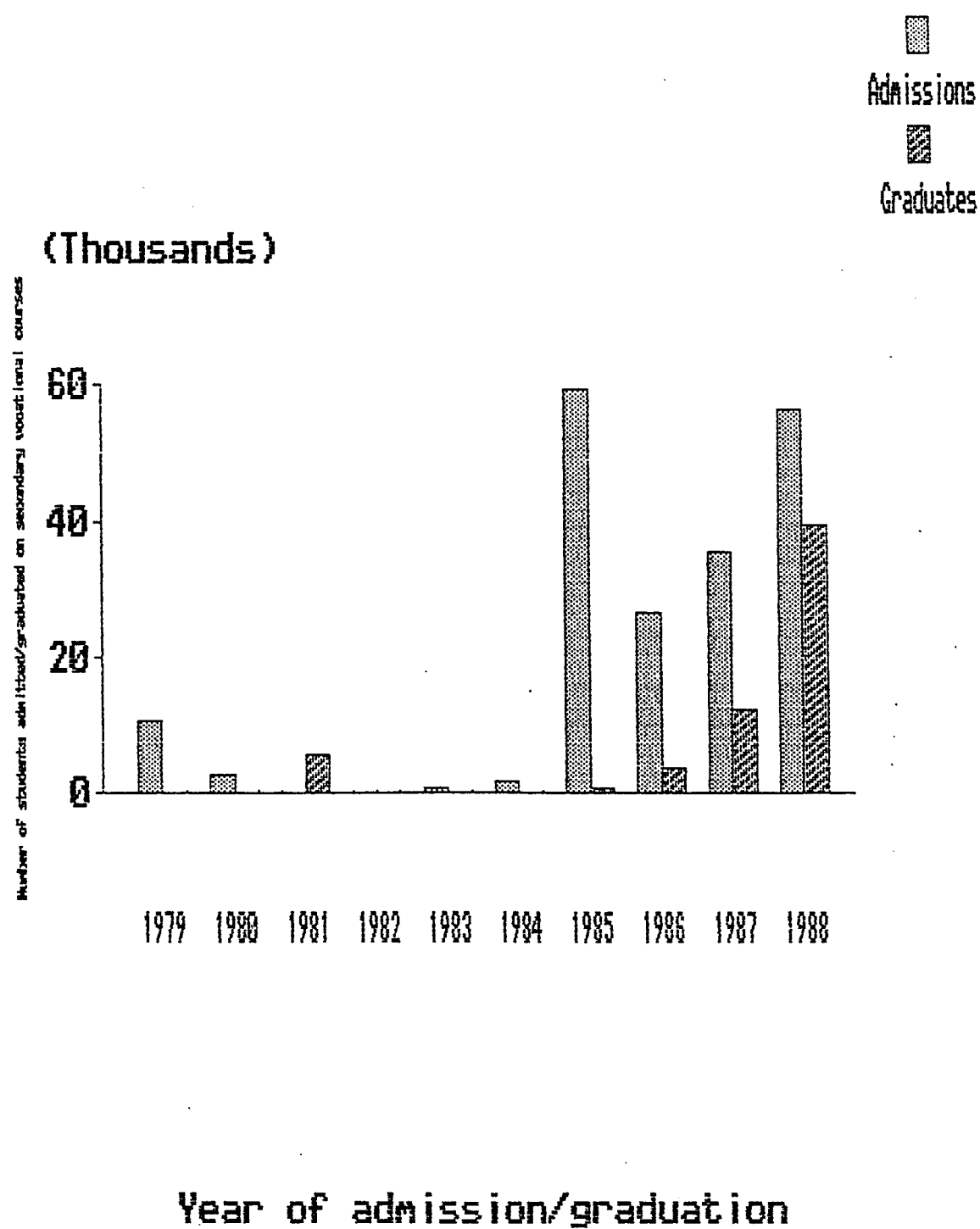


Figure 6.9: RTVU admissions and graduates on secondary vocational courses

Course delivery and audio-visual facilities

The teaching material of the RTVU is centred around television programmes and print, but also includes audio-recordings. The latter, however, is only a small part of the teaching material and little information exists on it. My purpose is to explore the changes that are taking place in the delivery and the audio-visual facilities, some of which have implications for learning and access; these implications will be examined in the second part of the chapter.

The television programmes are usually of a lecture format and hence carry the major burden of information transmission to students, with text taking a subsidiary role. This means that each course requires a considerable number of programmes to provide all the teaching, in the same way as lectures would in a conventional college. In the early days of the RTVU there was insufficient transmission time on the microwave network to satisfy the needs of all the courses, as explained earlier in this section. Also the limitations of the use of the microwave network meant that programmes could only be transmitted during the day, between 08:30 and 16:10 hrs (McCormick, 1982, p.64). The distribution through microwave meant that all areas that could receive programmes did so on the national Central China Television station (CCTV) using conventional aerials.

The advent of satellite broadcasting in 1985 (see Chapter 5, p.123) allowed the CRTVU to increase the amount, and change the timing, of transmission of programmes. The television programmes are now transmitted via satellite by the China Educational Television Station (*Zhongguo jiaoyu diantai*) on Channels 1 and 2:

Channel 1: 16:50-23:00 hrs, Monday-Sunday;

Channel 2: 08:00-14:00 hrs, Monday, Wednesday, Thursday and Friday; 08:00-12:00 hrs, Tuesday, Saturday and Sunday.⁴⁸

During the transition to two satellite channels a mixture of microwave and satellite was used.⁴⁹ In theory local television stations should re-transmit satellite programmes for those people who are not able to receive them direct from the satellite, but this seems to be uncommon.⁵⁰ There are no national figures for the number of workstations or branch schools that have satellite receiving equipment, but reports from some PRTVUs indicate

that many do, and of course this number is growing.⁵¹ Video-tape recordings are also made at PRTVU and branch school level and distributed to those workstations that cannot receive satellite transmissions. Thus reception now depends upon three means: going to a centre that has a satellite dish, going to one that has a video-tape recorder, or receiving a re-transmitted programme on a local television channel. In practice only the first two are reliable. The use of video-tape recordings has been made possible in part by the World Bank Project, because this provided much of the recording and replay equipment. All PRTVUs were provided with twelve video-cassette recorders and associated equipment for mass duplication of cassettes to distribute to workstations etc. (Hawkrige, 1990, p.15). In Zhejiang, for example, Xiaoshan Branch School has equipment for recording off-air and has a closed circuit system to replay programmes.⁵² Those centres without receiving and recording equipment rely upon the PRTVU to sell them tapes (10 yuan per one-hour tape). Centres can get tapes direct from CRTVU for those programmes that are not transmitted at all, because of lack of air time. Rural areas are likely to be served by video-cassette recordings, though there is no evidence, nationally, on the availability of VCR replay equipment.

The World Bank loan also allowed some PRTVUs to set up studio production centres for television programmes. As I have already noted, nine PRTVUs have full transmission-quality studios, and a further nineteen have less advanced equipment that is supposed to allow for video-cassette programmes (Hawkrige, 1990, p.13), although they seem to use them for producing transmitted programmes.⁵³ The World Bank Project evaluation reports a surplus of studio capacity, though the predicted programme production figures have been by and large exceeded (Hawkrige, 1990, p.14). I have already mentioned that some PRTVUs will have local expertise, and some consider that it is better than that of CRTVU. There also may be local needs for courses not appropriate to offer nationally. However, some of the courses made by PRTVUs and transmitted nationally do not seem to fall into these categories.⁵⁴

Along with the television material there is also text production. Again the bulk of this is done by CRTVU, although PRTVUs do produce some texts. There are two types of text

produced by CRTVU: course books, that resemble conventional textbooks; study guides, that outline aims and objectives, contain notes and explanations of difficult points, and provide answers to exercises in the course books (CRTVU, undated, pp.18-9). Figures for the proportion of course books that are specially prepared by CRTVU (some courses use existing conventional textbooks) are not clear as only global figures are given for print. The latest figure gives some 800 'books' (700 since the establishment of the CRTVU publishing house in 1972, with a total of 83.6 million copies; *Xie & Li*, 1990, p.3), but just what is meant by a 'book' is not clear. The CRTVU now has printing presses (through the World Bank loan), but they were only just operational in 1990 (HawkrIDGE, 1990, p.15).

While no detailed evidence exists about how books are distributed it appears that they are mainly distributed through the PRTVUs, branch schools and workstations. A survey done in 1986 (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, p.8) showed that the main reason for not reading the course texts was that they had not arrived on time! (I will discuss this survey in more detail later.) However, this was only for Science and Engineering students and it seemed to be caused by special circumstances. For Chinese Language and Law students it was rated as second (a long way behind 'lack of time'), and again special circumstances were connected with the course texts (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, p.22). The discussion of the survey results by the authors nevertheless pointed up the problem of distribution of books and recommended that they be produced earlier (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, p.35).

All centres of the RTVU have some kind of building, with workstations having at least a classroom and branch schools and PRTVUs having quite substantial buildings. Indeed a branch school can resemble a conventional institution, with many classrooms, laboratories and even computer rooms. In the Hangzhou Branch School there are thirteen classrooms, several laboratories, a library, and a computer room for a total student enrolment of about 14,000 students on a variety of courses. In addition there is a video studio for making programmes and a number of rooms for copying from satellite transmissions, the multiple duplication of video-cassettes, and audio-recording and copying.⁵⁵ Sizes of buildings and facilities vary from centre to centre and it is impossible to generalize about them.

However, the impression is of a desire to develop facilities, rather than to rely upon existing institutions,⁵⁶ although of course they are rented when insufficient are available in the RTVU centre. This development even stretches to dormitory accommodation for students.⁵⁷

The justification for providing facilities is that students study full time and need access to rooms to view television programmes, and do the required experiments. Even allowing for the fact that laboratory facilities are by and large under-used in conventional higher education (World Bank, 1983, p.169), it is necessary to provide facilities because of the general shortage of institutions and the difficulty of access to them. This justification may now be under threat because firstly, there has been a decline in students studying science and engineering subjects, and, secondly there has been a shift from full-time to part-time and spare-time study. Thus at Hangzhou MRTVU laboratories were only in use for about 24 hours per week mainly in the evening. Further the switch to secondary technical courses (*zhongzhuan*) means that the equipment in the laboratories is too sophisticated for their needs.⁵⁸ Despite this some branch schools and workstations still have to send students to local factories, or to the main PRTVU to complete laboratory work, and even then less than half of the required experiments may be completed.⁵⁹

A time of transition

A period of transition in the early 1990s is evident in the change in structure explored in the previous section, combined with the developments in programmes, students and delivery in this section. The system is in transition on a number of fronts. Firstly, the structure is changing to emphasise local levels of control, particularly at the provincial level. Secondly, there is a decline in diploma teaching and a shift to other kinds of courses, including secondary vocational courses with a significant proportion of school leavers. The third front is the changes to the teaching system, partly as a result of the changes in study programmes, partly as a move from full-time to spare- or part-time study, and partly as a result of increasing use of video-cassettes. All of these fronts have important implications for the role of the system in higher education that I will explore in the third part of the chapter.

THE PROMISE OF THE RTVU

In this second part of the chapter I will use the headings derived from Chapter 5 that considered what distance education had to offer, namely: improved learning, better access to education, economic development and cost effectiveness. This will allow an examination of the role of the RTVU in higher education in China, to put along side the developments already explored in the first part of the chapter.

Learning

There are two inter-related aspects to this. One derives from the hopes of those who advocate distance education to improve learning by the use of a variety of modern media. Such advocates hope, for example, that distance education can encourage active learning. The other aspect derives from the needs of China, in particular the extent to which theory and practice can be better combined. Chapter 3 has indicated the failure of conventional higher education to provide either an adequate learning experience or the kinds of graduates that the economy needs. This section will examine whether or not the RTVU improves the situation. By way of a crude overall evaluation of learning I will also examine what little data exist for examination pass rates, as measures of success.

The use of the media

A central part of any examination of the use of media in any learning situation must be the views of students. Several studies exist that can be used for this examination, and the first part of this sub-section considers them. I then take up an issue derived from Chapter 2, on group learning, because this is a potentially different interpretation of distance education, which is usually described in terms of individual study (one of Keegan's characteristics in Chapter 5, p.106).

Students' views of media

There are three sources of information for these views:

- a a study done in conjunction with CRTVU staff at the branch school in Foshan in 1983, and written up by me (McCormick, 1985);⁶⁰

- b a survey conducted by the CRTVU Distance Education Research Office (DERO) in 1986 (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988);
- c the large scale survey of graduates undertaken by CRTVU and other PRTVUs in 1986 with the aid of the World Bank loan, and reported in English to the World Bank (CRTVU, 1990).

The Foshan study was also part of a more extensive report I made to the CRTVU as result of my work there in 1982-3, including visits to PRTVUs (McCormick, 1983), and I shall refer to some of the data in this larger report. These studies tend to reinforce each other though they have different strengths and weaknesses.⁶¹

In terms of the student learning experience the role of self-study is the most significant feature. It is important to students, representing the largest single element of study time (see Table 6.4).

Table 6.4: breakdown of student weekly study time (hours)

	DERO survey (1986)	Foshan study ⁶² (1983)
TV	9.8	18
Radio/audio	0.7	-
Face to face	4.0	4
Tutorials	6.0	10
Experimental work	1.4	-
Assignments	13.6	-
<u>Self-study</u>	<u>22.1</u>	<u>30</u>
TOTALS	57.6	62

Although the precise figures vary, the proportions are equivalent, showing little change in the study regime that students experience over the period between the two investigations.⁶³

But 'importance' is not only judged by the time students give for self-study; students also judge other components of the learning package in terms of how it helps self-study, and describe their general study methods in terms of studying at their own pace rather than that of the course.⁶⁴ In interviews at Foshan some students showed a sophisticated view of

self-study as both a *method of study*, helping to ensure a proper internalizing of the material, and as an *end in itself*, to develop independence (McCormick, 1985, pp.91, 93-4, 96).⁶⁵ In the graduate study the employers and the students recognized self-study as a strength compared with conventional university students (CRTVU, 1990, p.7-8). In fact self-study formed part of a factor that included 'independent thinking' and 'problem analysis and solving' for science and engineering students, and I will come back to this under *Practical orientation and problem solving* later in this section.

For students the difficulty for self-study is that the other components, especially the television and tutorials, take up too much time and prevent them spending sufficient time on it.⁶⁶ Part of this is a misunderstanding of the needs of distance education on the part of the RTVU, at both central and local levels, and partly a lack of co-ordinated planning. The latter is illustrated in the burden of central courses (on television), PRTVU courses, and local (branch school or workstation) courses all seeking a place in the student's timetable, but being decided upon independently, i.e. at the various levels of the RTVU.⁶⁷ The lack of consideration of the needs of distance education is evident in the way the other components are designed and used. They see that components must complement each other as well as being used for special roles within the learning package. For example, television should deal with difficult points that need visual representation, audio-vision with explaining diagrams, and texts need to be clear to aid self-study where access to a teacher is limited. When that access is available, i.e. in tutorials, it should be used to deal with main points and with students' difficulties, rather than just repeating the texts or television in the form of a lecture (McCormick, 1985, p.88-90, 95-6). Indeed it is repetition that was often mentioned by students as a reason for not liking or using teaching material (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, pp.8 & 12), and formed one of the main recommendations on material design (p.35). In essence the students have a grasp of the need for an integrated learning package.

In addition to these global comments on the role of various media, students also showed an understanding of the needs of self-study and how the individual components could aid them. Thus, for example, they wanted: television to allow time for thinking, rather than spend all their time writing down what the lecturer writes on the board; television to

reduce the amount of information on screen and clarify visuals, especially under poor reception conditions; texts to contain summaries, examples and glossaries of terms; explanations to be detailed, self-contained and with logically linked concepts.⁶⁸ Their reports of their study methods in using texts indicated a high level of sophistication in skimming and scanning (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, pp.16 & 30), that could be aided by summaries, glossaries, and other learning aids. In Appendix 4 I have analysed the texts to see to what extent they are designed to aid student study, and this supports the complaints of students. Texts lack learning aids (such as study guides and summaries), and neither typographic design nor text style support students' self-study. Similarly some television programmes have been analysed (Appendix 5), and, although the use of visuals has improved over the years, they are largely lecture-based programmes with few concessions to the needs of distance learners.

Group learning

In Chapter 2 I discussed the tradition of group learning that was evident in much of the early communist education (e.g. at *Kangda*), and here I want to reflect on whether or not the RTVU makes use of this. In the early days of the RTVU, with its focus on full-time students, there was a possibility of exploiting group learning rather than the individual learning that is common in distance learning elsewhere in the world. Students form classes to view television programmes, attend lectures for local courses, attend tutorial sessions and do practical work. What I want to consider here is do they have any sense of studying *together*, as opposed to studying in the same place? There is no direct evidence on this question, but for example the stress on self-study noted above argues against this. So we have the image of students being reliant on their personal study of the text for the course, and wanting all the other components (television, tutorial material, and tutorials) to aid this self-study. Even the text must, according to students, be designed for them to work unaided. However, students do use each other, and the tutor, to develop their own study methods (McCormick, 1985, pp.94 & 98). Other evidence of group learning is mixed: 80% of students view television in the classroom (18% at home), and given the choice 67% still think it is the best place to view programmes - 32% would prefer to view

at home (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, p.11). The group viewing and the use of video replay in the RTVU make a TVI approach viable, but there is no evidence of this being done. The completion of problems (e.g. example calculations) and assignments within the class gives another opportunity for group learning. There is no evidence of problems (e.g. contained in tutorial material) being done in class, but assignments are done in class. The survey evidence is mixed, however, as Table 6.5 shows.

Table 6.5: percentage survey responses of where students do assignments

	Science & Engineering	Chinese & Law
Mostly in class	40	22
Both in class and elsewhere	34	10
Seldom in class	26	68

Source: *Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, (1988, pp.11 & 26).

Table 6.5 indicates different strategies, that may reflect different kinds of assignments, but does not strongly support any kind of collaborative work. Such work may of course be discouraged by the tutors, and that again may reflect both their views of learning in general and of distance learning in particular.⁶⁹ So it appears that the students do not make use of each other as a learning resource, and certainly the RTVU does not encourage it by the way it structures the learning material. The increase in part-time and spare-time students that was indicated earlier in the chapter will tend to emphasise individual study.⁷⁰

Combining theory and practice

In this sub-section I will consider how theory and practice are combined within the learning experience of RTVU students. In part this derives from the fact that they are adult learners, and in part from the specific learning experience offered by the RTVU. Given that most students are employed, and released from work or studying part-time, and that the majority (70%) work in enterprises as cadres or workers (60-70%) there is an

opportunity to make what they study relevant to their work.⁷¹ This can occur in a number of ways:

- a students as working adults have a better idea of how what they are learning might apply to the world outside college - they are practically oriented;
- b they can actually study in their working situation by taking local courses related to it, or through their graduate project;
- c when they go back to work full time they can more readily apply what they have learnt because of their familiarity with industry and perhaps their job status.⁷²

This situation of work and study in the RTVU gives them a potential advantage over conventional students in combining theory and practice both during their study and subsequently. In the sub-sections that follow I will take up each of the ways listed above, and discuss what evidence there is to support them.

Practical orientation and problem solving

Although there has been anecdotal evidence of the first of the ways ("a") the graduate survey provides the most systematic evidence to date. The survey asked both students and employers to rate themselves and RTVU students (respectively) on a variety of abilities, before and after graduation. The ability 'to analyse and solve problems' is indicative of the ability to apply what students learn and survey ratings of this ability will be explored, though they will be put in the context of other ratings because they have no absolute value (CRTVU, 1990, pp.7-8). Students thought they were already good at solving problems before graduation: 81% said they were 'good' or 'fair', compared to 51% at experimental work (a 'poor' ability), and 85% at self-study (a 'good' ability). 97% thought they had improved ('much' or 'somewhat') in this ability, compared with 66% (lowest) for 'literature and art' and 98% (highest) for 'self-study' abilities. The employers were unfortunately asked to rate it in a different way,⁷³ but nevertheless they rate students comparatively well on this problem-solving ability: 9% said students were up to university level before graduation and 91% after graduation. This latter figure compares with a poor rating of 60% for being 'able to read and translate a foreign language', and a good one of 96% for 'self-study'.

One of the complaints about the practical-based learning promoted during the Cultural Revolution was that insufficient attention was paid to theory. This was a complaint made against the 'July 21st Colleges' and a lack of theory was seen to limit long-term industrial improvement in the factories that had such colleges. Factory managers interviewed in Nanjing expressed their satisfaction with the good foundation of theory that RTVU courses offered.⁷⁴ While RTVU students may have a better blend of theoretical and practical courses than earlier routes for adults, and are more practical in orientation than conventional graduates, there still remains some doubt about their ability to innovate. The ability 'technical innovation and invention' was included in the graduate survey for both students and employers, giving relatively low ratings of 75% and 82% respectively (CRTVU, 1990, p.7-8).

Local courses and graduation projects

These courses and projects provide the second way of improving the possibilities of combining theory and practice for RTVU students.⁷⁵ I have already noted the provision of local specialities, at the level of the PRTVU, and local courses (within a speciality) provided by branch schools and workstations (under *Programmes of study*). Here I will give some examples from interviews (and documents) made during my 1983 visits to local RTVUs. These local courses are added to make the diploma more relevant to students, and it is done by workstations run by local district education authorities as well as those run by factories. Branch schools (also run by local education authorities) have local courses, though, as they serve a larger geographical area, they cannot run courses that are as relevant to students. For example, in the Kunming Iron and Steel Plant workstation they added a 'material science' course that has obvious relevance to the work situation of students there.⁷⁶ In an optics factory in Nanjing a range of courses were added, some very specific to the factory (e.g. electrical optics) and some of more general concern but missing in CRTVU offerings (e.g. engineering mechanics for those doing the electrical speciality). Such factories have their own education departments that can determine their needs and organize the courses. District workstations and branch schools need to go out and investigate the needs of the factories in their area to see what is required. Although they need the approval of the branch school and PRTVU, the nature

of the courses is determined by the factories and the workstation (or branch school).⁷⁷ In Foshan Branch School, in addition to the usual local courses, they organized visits to factories for the 1980 intake.⁷⁸ These students needed more industrial experience because they were younger and occupied jobs of lower status than the previous year's intake.⁷⁹ At the optics factory staff commented that, although they liked the completeness of the CRTVU offering of courses, they added their own courses to give a more practical emphasis. The staff at Kunming Iron and Steel Plant workstation implied that the more specialized courses that they added were more practical.

Even with this practical emphasis most of the local courses added by workstations and branch schools are 'taught' courses and would involve didactic teaching methods. Project work on the other hand allows a more profound application of knowledge and skills.⁸⁰ Thus the final graduation project is of great significance to combining theory and practice. Such a project is a standard feature of Chinese higher education,⁸¹ but in the RTVU it can have a stronger role in combining theory and practice. This is especially so when a workstation is run by a factory, because the project can be on a problem thrown up by the factory. In Kunming Iron and Steel Plant workstation, for example, the problem would be chosen by the teacher, and any designs made by students may be manufactured.⁸² The project is undertaken at the end of the diploma programme, and it seems to last from four to eight weeks.⁸³

The nature and reception of specialities

The degree to which a speciality may relate to a student's job will be one of the determinants of the extent of subsequent application of the knowledge and skills gained during study ("c" above). This has three elements: have students gained useful skills and knowledge; are they given a chance to apply them; and have they the ability to do so? This means considering who chooses the speciality, how it matches with the student's job, and whether or not they are able to apply what they have learnt.

There is no general evidence of who chooses the speciality that a student studies, but in discussing the match of the speciality to the student's job, a student in Foshan said that the employer decides the speciality (McCormick, 1985, p.97). Given that employers bear the

greatest burden of cost (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, p.18), it would be likely that they would choose. In any case even among those employers who oppose a worker studying with RTVU, they do not give the lack of fit between the job and the speciality as the main reason for opposition.⁸⁴

Of more significance is likely to be the match of the student's speciality with the job they get *after graduation*. However, my early investigations in 1982-3 indicated that the concern was as much about the level of the job matching graduate status as with the precise subject studied by the student. Some factory managers were concerned in 1983 that they were unable to promote graduates reflecting their worries about giving them a graduate-level job, and I speculated at that time as to whether this might explain the drop-off in students taking science and engineering diplomas (McCormick, 1983, pp.16-7). Students interviewed at Foshan Branch School not only referred to the lack of promotion, but also to the local oversupply of graduates with particular specialities resulting, for example, in 30% not being suitably placed after graduation (McCormick, 1985, pp.92 & 97). It is still not possible to substantiate my earlier speculation about the reason for the decline in demand (p.158-9), but there is evidence from the CRTVU graduate survey about the match of the qualification (level and speciality) with the job after graduation.

The survey of graduates themselves confirms my anecdotal evidence of 1983, indicating that 66% think they can 'suitably apply their knowledge gained at the RTVU to their work'.⁸⁵ The information from the employer is of even more significance, because the questions they answer separate the level of qualification from the specialism. The responses are given in Table 6.6 (overleaf).

Table 6.6: employers' ratings of job requirements in terms of qualification level and speciality

<i>Qualification required for the job</i>	(%)
Greater than university	21
Equal to university	55
Senior secondary school	22
Junior secondary school (or below)	2
<i>Match of specialism to the job</i>	(%)
Complete match	23
Basic match	55
Not a good match	13
No match	10

Source: CRTVU, (1990, p.9).

So the employers are generally happier with the placement of students than the students themselves. Although this is not surprising given their interests, the response to the follow-up question is: those who said there was 'not a good' or 'no match' said this was because the graduates' jobs did not match their speciality. The survey therefore shows that there is a significant problem with regard to the nature of the specialism that is preventing graduates from applying their knowledge.⁸⁶ It seems to be this rather than the fact that graduates are not able to apply knowledge (only 12% chose this reason for the lack of match). The ratings considered earlier, on the various abilities of graduates, were generally positive so they tend to support the view of the graduates' ability to apply knowledge.

The mismatch of graduates to the jobs they go to was a problem addressed in Chapter 3 in the context of conventional higher education. The figures for mismatch given were very variable (with some being higher than for the RTVU), and as much a function of the graduate job assignment system as of the appropriateness of the higher education system.⁸⁷ For the RTVU the situation is different because unlike graduates of conventional colleges and universities the RTVU graduates are not allocated to a job by central or provincial

authorities. As they are in the main employed already it is for their unit to arrange a change of job within the factory or enterprise. The RTVU system is intended to give its graduates the same recognition as conventional three-year diploma (*zhuanke*) holders.⁸⁸ After graduation they can be technical staff cadres, or workers, but it is their employing unit that will arrange suitable work. They are also entitled to conventional graduate salary and status if they work for a state-owned enterprise.⁸⁹ For graduates employed by collectively owned enterprises the salary is determined by "the departments concerned in the various provinces, municipalities and autonomous regions". Those graduates who were unemployed on joining the RTVU (or who were admitted straight from middle school) have no guarantee of a job, as they are not part of the conventional sector's job assignment system, nor have a unit to return to.⁹⁰ The provinces "may, according to their needs, select and employ the best".⁹¹ These graduates will have their salary determined by the provincial authorities. Local RTVU staff have no role in the placement of students, though they do arrange the contracts between units and students.⁹²

Recent developments in graduate job assignment policies and procedures may give some hope for the "unemployed" RTVU graduates, and perhaps even for those in employment who understandably are dissatisfied with returning to a job which does not match their expectations.⁹³ But the creation of a job market is at the root of the problem of job assignment in all sectors of higher education. In both conventional higher education and the RTVU the fact that graduates find themselves in the wrong jobs can only be rectified by job mobility. The system of keeping workers in the same job for life needs to change.

Measures of success

Crude measures of overall success of learning would be the graduation rates of particular cohorts of students, or, failing that, course pass-rates. The evidence available is patchy. Only one figure for graduation rates is available: of 110,000 admitted in 1979 69% graduated in 1982 (Hawkrige & McCormick, 1983, p.168). Course pass-rates have been very variable ranging from 72% to 96% for diploma courses (McCormick, 1982, p.66; Hawkrige, 1990, p.31), and 70% to 85% for inservice courses (Hawkrige, 1990, p.31). Part of the problem is the poor statistical records at a national level because of poor

computer systems (Hawkrige, 1990, p.16-7, 29, & 33). A few PRTVUs have developed their own computer record systems that allow them to analyse results, and Table 6.7 shows course results of Zhejiang PRTVU for 1989. Unfortunately there are no separate figures for self-study graduation rates or number of years to graduate.

Table 6.7: course average, maxima and minima pass rates for the Zhejiang PRTVU in 1989 for full-time and 'self-study' students

	<i>No. registered</i>	<i>% sitting</i>	<i>% of those sitting who pass</i>	<i>overall % pass rate</i>
Full-time				
Philosophy**	178	100	98	98
Ordinary				
physics*	202	92	77	71
Higher maths*	202	92	77	70
Ideological				
education	169	100	95	95
<i>Overall</i>	1903	95	89	84
Self-study				
Philosophy	928	82	79	64
Ordinary				
physics*	569	77	44	34
Higher maths	569	76	46	35
Ideological				
education**	226	95	93	88
<i>Overall</i>	14835	81	72	58

* minimum pass rate

** maximum pass rate

(Note that small population courses (less than 25) have been ignored.)

These figures indicate, not suprisingly, that self-study students do less well than those studying full-time, and also that science and mathematics courses are the most difficult, for both groups. The poor performance of self-study students is shown in both a higher

drop-out (lower percentage who sit the examination) and a lower success of those who sit the examination. A higher drop-out would be expected from self-study students, who do not have the pressure and indeed support of full-time study. These global figures of success are, however, quite good particularly for the self-study students. In Chapter 8 I will compare these figures with those for the self-study examination system.

In these days of customer satisfaction with quality it is fitting to leave the overall judgement to the employers. The graduate survey of (CRTVU, 1990, p.9) asked employers to evaluate their RTVU graduates' quality overall (*dui ni danwei dianda biyesheng zongde pingjie*). Table 6.8 gives the ratings of employers and shows a high level of satisfaction with RTVU graduates, despite the fault in the rating scale.⁹⁴

Table 6.8: employers' overall evaluation of RTVU graduates

<i>Have [complete] confidence in</i>	<i>Fair confidence in</i>	<i>Average confidence in</i>	<i>Poor quality</i>
39.8%	46.4%	13.1%	0.7%

The only directly comparable data for the conventional sector is for the vocational colleges and Table 6.9 gives an overall judgement of them (National Polytechnic Tracer Study Group, 1989, Table 79). That judgement is slightly less positive than the one in Table 6.9, if those saying vocational college graduates are worse than those of other institutions (10.1%) are taken to be directly comparable to those in Table 6.8 who rate RTVU students as 'poor quality'.

Table 6.9: employers comparing vocational graduates with those of other institutions on 'intelligence and ability'

<i>Better</i>	<i>Equal</i>	<i>Worse</i>	<i>No response</i>
11.7	66.8	10.1	11.5

It may be reasonable then to suggest that RTVU graduates are of good quality compared to those in the conventional sector, both by virtue of their work situation and their experience in the RTVU. However, the learning experience in terms of the use of media

does not match up to the hopes of those who advocate distance education, nor indeed to RTVU students.

Access

Chapter 5 noted that egalitarianism as currently expressed in China is more in terms of overcoming barriers of access to education by disadvantaged groups (barriers of geography, educational background, finance, gender and race), rather than exclusively in terms of class as was the case in the Mao period (see Chapter 2). The mass access afforded by distance education certainly has the potential to *satisfy demand*, as I will show in the case of the RTVU, along with the potential to overcome the barriers to access. But distance education also has a potential to promote *openness* in terms of 'open entry' and 'open learning', but as I shall show the RTVU does not exploit this potential. I consider each of these aspects of access below.

Satisfying demand

Chapters 3 & 4 have already shown a large unsatisfied demand for higher education among both school leavers and the adult population. Although most of the school leavers who enter adult higher education go to the RTVU, Chapter 4 indicated how small the total number of students is compared to the demand. Government policy towards their entry to adult higher education, and towards the expansion of diploma-based adult higher education, means that despite the capacity of the RTVU it has a declining role in satisfying the demand from adults. There is also, as I noted earlier, evidence of a reduction in demand for RTVU diploma programmes. The growth of part-time and spare-time study in the diploma programme may be a way of reversing this but there is no evidence yet of total numbers (i.e. including full-time, part-time and spare-time) growing. In any case there may be a problem of 'throughput'; in other words will these part-time students finish their complete degrees in a reasonable time, or indeed ever? This evidence, coupled with the change in policy to emphasize inservice and continuing education, make it unlikely that the RTVU will be able to expand its provision such that it could satisfy the excess demand. This is true whether by means of the direct entry of

school leavers into the RTVU, or by their entry some time after school graduation as 'adults'.

Access for disadvantaged groups

The groups that are educationally disadvantaged in China are those in the lower classes, those geographically isolated from centres of educational provision, of which peasants in rural areas form the bulk, and members of minority populations.⁹⁵ Rural education, as I have shown in Chapter 3, has only recently been emphasised, and the RTVU has reflected this recent emphasis. In well developed areas such as Jiangsu and Zhejiang the 'no-change' philosophy of having the same diploma courses in rural areas as in urban areas may work, whereas in less economically developed areas the courses may not suit the mainly agricultural economies. However, the establishment of agricultural specialisms in the diploma programme and the 'Prairie Fire School' (*liaoyuan xuexiao*) represent a significant change of emphasis.

Although the RTVU may cater for rural areas in terms of study programmes, do people in these areas have access to the RTVU system? There are several reasons why access is denied, or is less than satisfactory. The main reason is that workstations and branch schools are largely based in the urban areas, and so there is no local provision of tutorial support. In well developed areas such as Jiangsu all counties have workstations and rural students make up a significant proportion of the students (Gu, 1989, p.2-3). Yunnan on the other hand only has workstations at prefecture level (i.e. above county level) with two of the seventeen being without any RTVU centres. Figure 6.10 (overleaf) shows the cities and county towns in each of the prefectures (bold numbers). Table 6.10 (p.188) shows those that have RTVU centres and their size, based on the 1988 intake.⁹⁶ (The numbers in the first column of the table refer to those in Figure 6.10. Thus '1-1' means the '1' dot (or circle) in prefecture 1.) The two prefectures labelled 16 and 17 (minority autonomous prefectures) are without workstations.

In addition to the MRTVU in Kunming city there are thirteen branch schools and one workstation in provincial industry, banking and government departments within the city with a total of 928 students admitted in 1988. Thus almost half of the some 4000 students admitted in the whole province were in Kunming city. The two adjacent prefectures (Qujing and Yuxi - numbers 4 & 5 on Figure 6.10) account for another twenty percent, with the remaining 2500 or so being scattered over rest of the 380,000 km² of the province. A large prefecture like Simao, one hour by aeroplane from Kunming, had only 61 students admitted in 1988, and like all but one prefectures they would all be in the town (in this case Simao). Xishuangbanna town, close to the Burmese border and 12 hours by bus from Simao town over mountainous terrain, has about the same number though it is a much smaller prefecture. In 1983 when I visited there were no workstations outside of Kunming⁹⁷ and most of those listed in Table 6.10 seem to have been established after 1985 (Xie & Li, 1990, pp.919-57).

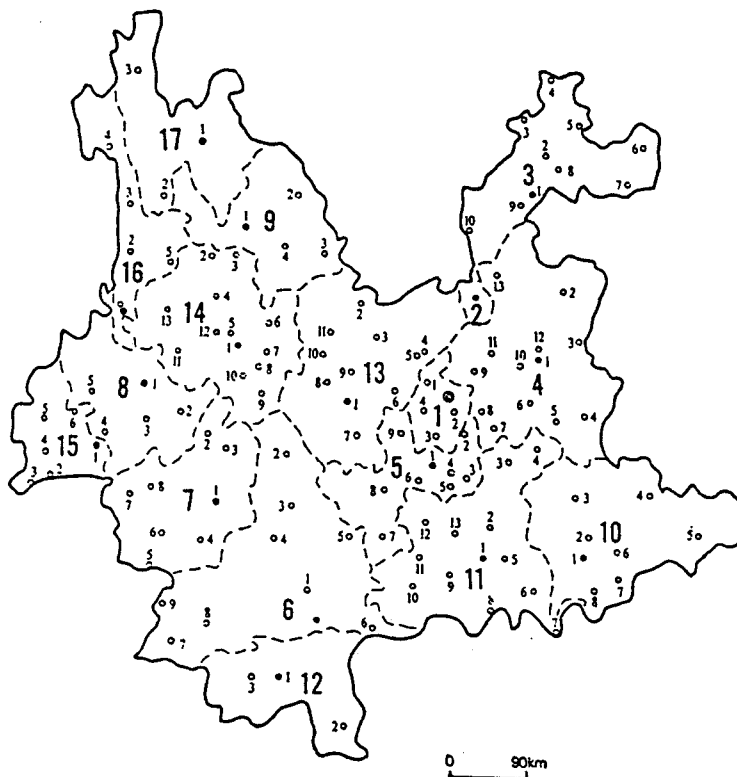


Figure 6.10: administrative divisions in Yunnan Province

Table 6.10: the distribution of RTVU branch schools and workstations in Yunnan Province

<i>Location</i>	<i>Branch School etc.</i>	<i>1988 intake</i>
1	Kunming City MRTVU	800
1-1	Fumin County WS	38
2	Dongchuan City WS	14
2	Dongchuan City SBS	20
3	Zhaotong Pref. WS	205
4	Qujing Pref. WS	434
5	Yuxi Pref. WS	363
6	Simao Pref. WS	61
7	Lincang Pref. WS	169
7-6	Gengma Dai-Va Aut County WS	*
8	Baoshan Pref. BS	106
9	Lijiang Pref. WS	41
10	Wenshan Zhuang-Miao Aut Pref. WS	6**
11	Honghe Hani-Yi Aut Pref. BS (Gejiu City)	259
11-1	Gejiu City BS	111
12	Xishuangbanna Dai Aut Pref. BS	72
13	Chuxiong Yi Aut Pref. BS	58
14	Dali Bai Aut Pref. BS	96
15	Dehong Dai-Jingpo Aut Pref. RTVU	177

Key MRTVU: Municipal RTVU

BS: Branch School

SBS: System Branch School (i.e. in a factory etc.)

WS: Workstation

Pref.: Prefecture

Aut Pref.: Autonomous Prefecture

Aut County: Autonomous County

* This figure is included in that of Lincang Prefecture WS, and is about half of students.

** In 1987 there were 74 admitted.

In other poorer provinces such as Guizhou (the same size population as Yunnan but half the area) a similar picture emerges, with just under half of the students being in Guiyang the provincial capital and the rest being in the town that is the prefectorial seat. There is one workstation attached to a factory (i.e. a system workstation) in a county town. Unlike Yunnan the prefectures with large numbers are not all adjacent to the provincial capital, although apart from one the prefectorial seats are close to the capital (120 km or so). But there is no simple relationship between either remoteness or lack of development and the spread of the RTVU system. Gansu province has some prefectures with workstations in every county and others with none outside the prefectorial seat, but most villages will still be a long way from a RTVU centre. It is for this reason that some branch stations have accommodation facilities, allowing rural people to study with the RTVU. On top of these problems of access to facilities is the difficulty of language, especially for minority peoples. Most of the RTVU material is produced in standard Chinese (*putonghua*), putting minorities at a disadvantage. This is especially because the courses do not assume the pre-requisite of secondary school education, where they would have studied standard Chinese.

The delivery of television programmes is another factor that mitigates against students in rural areas. This may be a temporary factor, and when the satellite receiver technology develops, to allow cheaper dishes, mountainous provinces like Yunnan could benefit. Whether minority groups in such provinces will benefit is another issue. The evidence from Yunnan in Table 6.10 indicates that even in the prosperous minority area of the Dai (area 12) the number of students is low, and most of the minority prefectures (10-15) have relatively low numbers. Nationally the RTVU had 16,127 minority students enrolled in 1988, representing about 3.7% of all students, which is just over half their representation in the population as a whole. It is also about half of the figure in conventional universities (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.22 & 96-7). However, the RTVU takes in about 40% of all minority students. In summary then, the RTVU does not seem to serve these very disadvantaged groups as well as the conventional system, at least for the moment.

Overall the potential of the RTVU, in terms of access, has yet to be fulfilled. This is because government has changed policy (preventing the satisfying of demand), and because the infrastructure of the mass media and support of learners is not yet fully developed to give access to disadvantaged groups.

Openness

The RTVU does not have *open entry* and so fails on this dimension of openness. But it maintains this stance because it has to resolve two contradictions: the need for openness and the need for planning; the need for openness and the need for quality control.⁹⁸ If the RTVU had open entry, as in the case of 'free viewers', then large numbers may come to the University and make planning impossible. Thus it would be impossible to adhere to quotas set by provincial government. This is important in a planned economy such as China, and also from the point of view of being able to fulfil the expectations of students for promotion on graduation. (A point already made in relation to the match of the speciality and the job.) The second contradiction (openness v quality control) relates to the unified adult education entrance examination that all RTVU applicants have to sit. 'Free viewers' avoid this examination by being unregistered students, and this both acts as a disincentive for others to take it, and may also allow unprepared students to study. The RTVU staff argue that these students are less well qualified and cannot cope with study. When faced with the fact that there are people who choose to take the 'self-study examination system' route, that has no entrance examination, the CRTVU staff admit that this is an anomaly. They have pointed this out to the State Education Commission which is now going to issue documents to allow the two systems to compete on an equal footing.⁹⁹ There are important issues of competition and collaboration involved and I will explore these in Chapters 8 & 9.

One of the reasons why the government (local and national) will want to restrict entry is because this could entail an open expenditure commitment, that would require some quota to control. (Fear of such a commitment was one of the countervailing reasons discussed in Chapter 5, p.120.) The entrance examination provides the mechanism for controlling this entry and hence the expenditure.

Concepts of *structure* and *dialogue* were suggested (in Chapter 5) as ways of exploring open learning in a particular distance learning system. The RTVU is high on 'structure', with no choice over study order, rigid assessment tasks and submission dates, and tightly defined learning materials. There are attempts to meet students' needs through local courses but they are not specifically geared to individual students, rather to their employers. The amount of 'dialogue' seems to be mixed with the programme makers of the CRTVU having no interaction with the learners, although some does take place through tutors. However, as we have seen students are not altogether happy about the amount of response tutors make to their individual problems. So the RTVU could not be called an open learning system on either of these two aspects (structure and dialogue). Taken along with the lack of open entry the RTVU seems to lack openness.

Economic development

Chapter 4 has already explored the contribution of distance education to economic development, and so this sub-section deals with the specific contribution of the RTVU. Central to this is the relationship between education and the economy and I want to illustrate this for a particular locality, Xiaoshan, a city in Zhejiang. The RTVU responds to the needs of the economy at the local and the national level and both will be considered.

The example of Xiaoshan

This city has a fast developing economy and the President of the branch school there stressed this (and the relationship between economic growth and education), quite spontaneously, in an interview with me (11 May, 1990). What follows is a summary of the argument he put.

The city leaders were faced with local industries which needed college graduates. Companies that exported needed to have high quality, and competition was such that those who could not achieve it would fail. Some companies bought in technology from abroad and needed a trained workforce to operate it. Thus economic development created a need for a trained workforce. However, local industries could not attract conventional

college graduates to this small town. This led them to consider expanding the workstation to a branch school, rather than setting up a conventional college. The economic advantages that the RTVU had were: less investment in buildings and facilities to start up; less staff required to run it (role of television in teaching); cheaper for some factories to set up a workstation (under the branch school) than to send their workers off to college elsewhere.

The town saw the educational advantages of the RTVU as: offering more flexibility in, and a wider range of, specialities, compared to what could be offered by a new conventional college; using part-time and spare-time study with less effect on production by not removing workers; workers becoming students using what they learn immediately, unlike conventional graduates; RTVU graduates being more effective than conventional ones, because they are more practical; the branch school being able to concentrate on the local needs (e.g. they focused on the mechanical speciality as it was needed locally), and adapting courses to meet local needs; specific courses being run on request.

They have no problem in recruiting students, unlike other areas where the disincentive to potential students of lack of promotion of RTVU graduates has some effect on admission levels. Indeed seventy-percent of graduates are promoted. Factories are competing and if they do not allow students to train (to avoid dissatisfaction from graduates not promoted) they are likely to fail. Some even contract RTVU students who started as 'school leavers' (and who are therefore unemployed), and pay their study fees. The city's view is that education must match local economic needs and the local level of development, thus while some areas may have difficulty in supporting the RTVU, in Xiaoshan economic growth means it does not.

But it must be remembered that there is still a strong line in rhetoric in China. After I had interviewed the President of Xiaoshan Branch School he took me on a tour of the building, which on a weekday morning was deserted. The classrooms and laboratories were empty, but for a few final year students who had returned to finish off their graduation projects. Most other students were studying part-time or spare-time, and these

empty buildings represented a threat to the RTVU's cost effectiveness, so greatly praised only minutes before and forming the basis of the use of the RTVU.

The RTVU's national responsiveness

The above summary reflects the view of the relationship between education and economic development in China that has emerged over recent years, as I noted in Chapter 2. The RTVU was seen as responsive to local needs, at the level of the specialities and the courses they produced. Chapter 4 has already shown the RTVU's contribution at the national level to the total output of graduates and the correction to the imbalance of the degree:diploma ratio. From the evidence of the changes in student numbers, the RTVU responded to the need for economics and management graduates, to improve the running of industries, by the introduction of these specialities. The huge numbers that were recruited bear witness to the demand for such specialities (see Figure 6.4).¹⁰⁰ However, it appeared to be continuing to produce large numbers of science and engineering graduates in 1989, although admissions in the previous three years had been dropping (see Appendix 3). The RTVU was again responsive when government policy saw that the economy may be better served by inservice and continuing education rather than diploma and degree qualifications. Although there is reluctance on the part of some RTVU staff to reduce the importance of diplomas, they have nevertheless responded to the changes in policy. They are indeed following the aims set out for them in the 1988 regulations:

In its education work the RTVU should be guided by the thinking that "education must serve socialist construction, and socialist construction must rely on education" to carry out the nation's educational policies to train qualified personnel required by socialist construction, and to raise workers' scientific and cultural level. (*Guan*, 1989, p.303)

Cost effectiveness

Chapter 5 has already laid out some of the aspects upon which cost effectiveness is dependent. Here I will not try to calculate a measure of it; for example, the cost per student or graduate. I doubt if the financial data exists upon which to base such a calculation, although figures are quoted. Such figures claim that at 300 yuan per student (and 500 yuan for salary) per year for the RTVU, it compares very favourably with the conventional higher education costs of 2000 yuan.¹⁰¹ To my knowledge the basis of such

figures has never been made public so it is impossible to be sure what is included, and in any case the financial sources are so numerous and varied across the country that a uniform cost figure is unlikely to exist.¹⁰² Instead in this section I will examine how cost effectiveness is being threatened by developments in the RTVU system, looking particularly at the fixed costs, the number of students per speciality and the variable costs. All of these affect the cost per student/graduate, whatever the difficulties in arriving at such a cost. Given the complex way the RTVU is financed it is important to examine cost effectiveness from the point of view of the various users, namely the employers, students and the government and so I will consider who gains from changes.

The threat to fixed costs

On the face of it the large numbers of students in the RTVU would seem to make any threat to cost effectiveness negligible. However, these large numbers hide worrying trends as I shall show shortly, and in any case must be related to the way the fixed costs are growing. These costs are represented by such things as the capital costs of material production (most notably the television programmes), the buildings at all levels and the equipment and facilities in them. The World Bank Project made available, through a loan, enhanced television production facilities and associated with this were local funds for the buildings to house them (studios etc.), some \$50 million and RMB133 million over the period 1984-8 (Hawkrige, 1990, Tables 2.1A & 3.1A). This investment can of course lead to more sophisticated programme making that would reduce the amount of programme-hours while increasing the quality, but it will also increase the cost per hour of programmes made. This increase in fixed costs will reduce the cost effectiveness, made worse by the production over-capacity noted earlier. Whatever is done with the media mix within the RTVU these high capital costs (and the continued replacement costs) will remain a threat to cost effectiveness.

In theory given very large numbers of students the fixed capital costs of television will represent a small cost per student. That may be less so for the cost of buildings at local levels, from PRTVUs to workstations, some of which is included in the RMB133 million quoted earlier. All local centres, including PRTVUs have to varying degrees built up

conventional classroom and laboratory facilities. This was necessary in the early days because all students were full-time and laboratories were not often within easy reach of students (e.g. in local colleges). The change to part-time and spare-time study has meant that facilities are underused, as the Xiaoshan example above illustrates. On the face of it the change from full-time study should not decrease the cost effectiveness, provided the figures of cost per student had been calculated at a time after the cost of new buildings had been incurred. This was not the case, as most of the figures are from pre-1984 and hence before the building programme the World Bank loan stimulated. This in itself is not a problem provided the buildings were part of a properly planned vision of the distance learning system.

However, in 1983 I detected a view of the workstation and branch school that runs counter to the idea of a distance learning system.¹⁰³ Those responsible for workstations and branch schools seemed intent on building up their centre to resemble a conventional institution, reinforced by the presence of full-time students (McCormick, 1983, pp.2-3). While in a factory workstation such facilities may be used by workers in a variety of educational programmes besides the RTVU, this is not the case for branch schools and workstations run by local education authorities (the majority). It seemed to me that the growth was not matched to an understanding of the nature of distance learning, and so expenditure may have been more excessive than was necessary,¹⁰⁴ and this may have exacerbated the problem now faced by such centres that have too many buildings that are empty for much of the week.¹⁰⁵

There is also a degree of what might be called 'empire building', or more kindly perhaps a lack of thinking about the system as a whole, even at local level. For example, in Hangzhou the MRTVU has facilities for both producing and multiple-copying video programmes along with laboratories for practical work. The PRTVU, in the same city, also has such facilities, though in the case of laboratories they are for students throughout the province who do not have access locally (Hangzhou MRTVU serves the city only). There is no co-ordination of such facilities and certainly no attempt at rationalization, despite the under-use of laboratories, for example. Some of this no doubt reflects the

rivalries between provincial and municipal authorities, but it must also reflect the tendency of most decentralized organizations to control their own facilities.

In parallel to the growth of capital expenditure is that of staff. Table 6.11 shows the growth of staff in the period 1979-88 showing the breakdown in terms of types; full-time teaching staff are mainly in the CRTVU and PRTVUs, whereas part-time staff are in the workstations and branch schools (CRTVU, undated, p.20). There are no figures for student enrolment so admissions are used based on the figures given in Appendix 3, although of course this gives an imperfect staff:student ratio.

Table 6.11: growth in RTVU staff and student numbers (thousands) 1979-88

<i>Year</i>	<i>F-t</i>	<i>P-t</i>	<i>Admin</i>	<i>Student</i>	<i>Student/staff</i>		
	<i>staff</i>	<i>staff</i>	<i>staff</i>	<i>Numbers</i>	<i>f-t</i>	<i>p-t</i>	<i>admin</i>
1979	3.87	12.0	5.3	128	33	11	24
1980	5.5	14.8	6.8	101	18	7	15
1981	6.5	15.5	8.4	6	0.9	0.4	0.7
1982	10.9	18.7	9.7	241	22	13	25
1983	11.5	25.2	11.3	312	27	12	28
1984	11.7	30.3	11.8	238	20	8	20
1985	11.2	15.8	13.5	466	42	29	34
1986	13.1	21.6	17.5	225	17	10	13
1987	9.1	14.0	14.4	154	17	11	11
1988	9.7	12.5	24.2	239	25	19	10

There is no simple message from these figures and certainly no evidence of a consistent decline in the teacher:student ratio, particularly as the student statistic of 'admissions' is not the most appropriate. The growth in administrative staff does, however, show a more consistent increase indicating a slight threat to cost effectiveness through raising the fixed costs.¹⁰⁶

Finally I will consider the costs of delivery of television programmes. Broadcast methods whether terrestrial or satellite are a pure fixed cost and, given the numbers of students,

will be very small. Also although a satellite is used it is unlikely that the RTVU pays anything for its use. However, the growth of video-tapes as a delivery method does pose a threat not to the fixed costs but to the variable costs. At the same time any fixed cost associated with also transmitting via satellite is still incurred.

The decline in student numbers per speciality

Despite the threats to cost effectiveness identified above, it can still be achieved if the high (and rising) fixed cost needed to use modern and expensive media, and improved buildings etc., can be set against large student numbers. Again absolute numbers are less important than trends. Here I want to look at how the introduction of more courses increases these numbers but not the numbers per speciality. Table 6.12 shows the growth in specialities and student admissions and the resulting ratio for the period 1979-88.

Table 6.12: students admitted (thousands) per speciality 1979-88¹⁰⁷

<i>Year</i>	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>88</i>
<i>No. of</i>										
<i>specialities</i>	2	2	0	4	5	7	5	10	6	11
<i>Student</i>										
<i>admissions</i>	98	79	0	185	236	206	273	215	130	192
<i>Students</i>										
<i>per</i>										
<i>speciality</i>	49	39	-	46	47	29	55	21	22	17

The obvious message from this table is the reduction in the number of students per speciality (apart from 1985) and hence a potential reduction in the cost effectiveness of the RTVU. (This reduction in cost effectiveness is because the costs to produce a course are being spread over a smaller number of students.) When the figures are analysed by faculty it is evident that all areas suffer a decline after their initial introduction. The variability makes it difficult to make any long term inferences about decline, but it reinforces the point about the difficulty for the planning of a distance learning system when numbers vary so much. Decisions about the amount of fixed costs to incur cannot

be made on a long term basis if numbers can vary so much. While this may not matter for general-purpose facilities such as studios and classrooms, it certainly will affect laboratories and equipment, as I have already noted. It also has implications for investment in more elaborate television programmes.

These figures look worse when local specialities are taken into account, as the case of Jiangsu PRTVU illustrates (Table 6.13).

Table 6.13: number of students (thousands) per speciality for Jiangsu PRTVU¹⁰⁸

<i>Year</i>	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>88</i>
<i>No. of</i>										
<i>specialities</i>	2	2	0	5	8	6	6	16	9	14
<i>Admissions</i>	8	7	0	11	15	17	27	12	7	11
<i>St/sp</i>	4	3.5	-	2.2	1.9	2.8	4.5	0.7	0.8	0.7

Table 6.12 shows that at a national level, using numbers of specialities offered only by CRTVU, the number of students per course roughly reduces by a half over the ten-year period. Taking into account provincially offered specialities Table 6.13 shows that it falls to a quarter of its initial levels, apart again from 1985.¹⁰⁹ Thus the flexibility and matching of needs that the local courses allow may have implications for cost effectiveness. I say 'may' because that to some extent depends upon the investment in course production in addition to the capital expenditure on studios etc. already discussed.

Variable costs

Two elements of variable cost are important for the RTVU: direct costs such as for tutorials, and indirect ones associated with students studying full-time and hence not working. Part-time staff are the main element of direct costs in tutorial costs, but Table 6.11 showed that the student:staff ratio has remained within the same order of magnitude over a ten-year period with great improvement in the boom year of 1985 and some in 1988. So part-time staff, as one would expect, are keeping pace with the changes in student number, and do not represent any threat to changes in cost effectiveness.¹¹⁰

The distribution of video tapes is, however, a potential threat. Putting aside the capital cost element of copying equipment there is a direct student cost related to the number of student groups that require a tape. Although this is paid by local centres, it represents a cost that did not exist prior to satellite transmission. Associated with this are costs for replay equipment and its maintenance, which will be to some extent related to variable costs.¹¹¹

A more positive move, as far as indirect variable costs are concerned, has been the change in emphasis from full-time to part- and spare-time study. Despite the problems it causes to fixed costs, noted above, it will make a considerable reduction in the variable costs. Whatever the reliability of absolute figures for the cost per student per year given earlier, the salary component is likely to be significant (500 out of a total of 800 yuan). Zhao (1988, p.226), the then Dean of Studies at CRTVU, gave a figure of a RTVU graduate studying part-time as two-thirds the cost of a full-time one based on a costing project at Liaoning PRTVU. On top of the salary cost is the lost production or at least its disruption by the removal of a worker to study (a general issue for the administration of adult education that I raised in Chapter 4). This component of the costs is likely to be the most significant of all those considered in this section, but it represents a change of nature of the system which has otherwise been developing towards a conventional system. That development, as I have argued, is a threat to the cost effectiveness and may represent a particular view of distance learning.

Who gains?

It is worth reflecting on who benefits in changes to the cost structure that appear to be developing. The example of the change from full-time to spare-time study shows the importance of this. Although employers may gain when workers study in their spare-time, the students do not! Here of course we are moving away from purely financial arguments, because the student may be no worse off (e.g. not losing any production bonuses), but the burden of working and studying is likely to be high given the conditions of study I spelt out in Chapter 5.

All of those involved in financing the RTVU will be differentially affected by the changes I have discussed in this section. By way of summary then I will tabulate how the various groups are affected by each of the changes.

<i>Cost type</i>	<i>Who affected</i>	<i>Comments</i>
Fixed costs		
TV production	SEC, PEC	No improvement in income but better qualified graduates
Facilities & buildings	SEC, PEC Pref/County Factory	Assuming LEA has separate funds for RTVU
Full-time staff	SEC, PEC	Possibly LEA at Pref/County
Video copying	PEC	Satellite funded by national government
Student Numbers per course	Pref/County Factory	Their income affected
Variable costs		
Tutorials	Pref/County Factory	
Video tapes	Pref/County Factory	
F-t to sp-t study	Factory	Social costs borne by student

This tabulation reveals the split of fixed costs and variable costs such that the former are borne mainly at the national and provincial government level. Not surprisingly the local education authorities and the factories carry the variable cost changes, and get the advantages of any improvement in the 'number of students per speciality'. Although this figure affects the economics of the large scale investment in fixed costs, national and provincial governments gain no benefit from its improvement. Daniel (1983) in arguing that distance teaching universities must improve cost effectiveness to survive, says that there are two factors upon which success depends: having a direct relationship with students, and there being some relationship between the number of students and institutional income. On both these counts the RTVU would fail, if it were an *institution*, but as I have shown earlier the *system* is moving towards an 'associate system' model, and in this case it might not fail. However, the cost effectiveness advantages for China as a whole may be reduced by the fact that the two factors, identified by Daniel, may not exist.

THE ROLE OF THE RTVU

Before summing up the role of the RTVU in China's higher education system, it is worth reflecting on its development because this forms the context of its role. The change in *structure* to emphasize the local level, particularly the PRTVU, is not only significant in terms of the general decentralization taking place within China, but also in the context of calls for it to form relationships with the other distance learning systems.¹¹²

The developments in the *nature* of the RTVU that will affect its characteristics as a distance learning system are: the increases in staff, buildings and facilities, and the preference for full-time study; the design of materials, the study pattern and hours. I will consider each of these in turn. The increases in *staffing, buildings and facilities*, as I have argued in the last section, seem to reflect a desire to create a conventional system.

However, I indicated that it is difficult to make a simple judgement on this, because of several factors. Firstly, there is a genuine lack of facilities that can be borrowed from the conventional sector; secondly there are rivalries between some levels (e.g. PRTVU and MRTVU); thirdly there is some empire building; and finally there are regulations about staffing for example that are intended to maintain quality.¹¹³ The change away from *full-time study* has put such increases in staffing and facilities into a new perspective and, at least in the short term, threatens the RTVU's cost effectiveness. Students have in the past shown a preference for full-time study, and RTVU staff see it as more likely to lead to success and quality (McCormick, 1983, p.2), a fact supported by the data on course pass-rates in Table 6.7.

This view of distance learning is evident in the *design of materials* that has continued to reflect a traditional teaching approach where television programmes are a substitute for lectures and study texts for conventional textbooks. Although there have been some moves to produce a wider range of programmes and to incorporate learning aids in texts, the changes have been slow and probably not extensive. This has been compounded in the past by the *study pattern* laid down at national and local level. But the students still perceive that self-study is the main learning method. The large number of programmes, along with tutorial 'support' (that is often yet more lectures), conflict with self-study

patterns such that students have a problem of excessive workloads (see Table 6.4). When students are predominantly part-time or spare-time then this overload may affect 'drop-out'; evidence from existing self-study students is that they are less successful (Table 6.7).

These developments form the backdrop for a system that has experienced rapid changes in study programmes and student numbers since the mid-1980s. The RTVU has responded to government policy and changes in demand by providing, in the early years, large numbers of graduates, with diplomas rather than degrees (Table 4.9), and with specialities and the practical abilities needed by the economy. This need is matched at the level of the national economy and the needs of particular employers. More recently the RTVU has responded to the new government policy changes by providing inservice and continuing education, and secondary vocational education. It has been equally responsive at the local level. But all these changes of policy have resulted in large fluctuations that threaten the cost effectiveness of the system, in terms of the utilization of buildings and facilities and use of teaching material. The constant making of new material for the new specialities and programmes must inevitably take its toll, and is not conducive to the improvement of learning that RTVU students, and indeed staff, want. Their reward for this responsiveness has been a reduction of the area of diploma studies that they value and which on the basis of the contribution to the needs of the economy is successful. In this context their concern to see diploma teaching as basic to their work, despite the change in government policy, is not surprising. The CRTVU at least is powerless to do much about the changes, because decision-making is moving more and more to local levels. The structure of the RTVU does not, however, simply mean that it is the PRTVUs that are becoming more important. As I will show in Chapter 9 the picture is more complex, with Provincial Education Commissions seeking to rationalize provision of education and change the nature of RTVU branch schools and workstations. In particular the advent of secondary vocational and rural education threaten the university-level provision that has been the basis of its past success. Whether it will continue to be successful or indeed a distinctive institution is difficult at this stage to predict.

NOTES

1. CRTVU (undated, p.1). The Bureau of Audio-Visual Education (*Zhongguo dianhua jiaoyu you*) has been added between the State Education Commission and CRTVU. The original diagram, without my addition, is also reproduced in Wei (1991, p.60).
2. In fact all the levels of the RTVU system below CRTVU (PRTVU, Pr/MRTVU, and BS) can directly run TV classes, although the PRTVU is only supposed to have them for experimental purposes (*Guan*, 1989, p.304). PRTVUs also include those RTVUs of municipalities that are considered separate from the province within which they are located, known as 'directly administered [by central government] municipalities' (*zhixiashi*), for example Beijing and Shanghai.
3. These are taken from the draft 1988 regulations (*Guan*, 1989, pp.303-7).
4. *Radio and Television University Temporary Regulations (State Education Commission 16 May 1988) - Guangbo dianshi daxue zanzing guanding (Guojia jiaoyu weiyuanhui yijiubaba nian wuyue shiliu ri)*. Reprinted in *Guan* (1989, pp.303-7).
5. Interview with Vice-President Gu Tinggui (retired), Jiangsu PRTVU (7 May 1990).
6. There in fact appears to be considerable over-capacity in studio provision, and the evaluation of the World Bank Project notes this and under-utilization (Hawkrige, 1990, p.14). The draft of the Chinese Government's proposals to the Bank, that I saw while at the CRTVU in 1983, included 29 studios. The World Bank's external advisers cut this down, but the number has crept up funded from other sources.
7. I detected such irritation in PRTVUs visited in 1990, but it is difficult to be specific. The evaluation of the World Bank Project does record that an unsatisfactory system of contracting exists between CRTVU and the PRTVUs (Hawkrige, 1990, p.14), and this may be the cause of some irritation.
8. Interview with Vice-President Gu Tinggui (retired), Jiangsu PRTVU, 7 May 1990. I do not know what role, if any, CRTVU takes in this association, although it was implied that it was an association of PRTVUs.
9. It seems that even with examinations PRTVUs have been asked to prepare mark schemes for national courses. (Interview with Tong Yuanhui of Jiangsu PRTVU, 15 May 1990.)
10. A *speciality* corresponds to a particular degree or diploma, e.g. mechanical engineering, and is therefore made up of a variety of *courses* that a student must complete to get a qualification. The equivalent in English would be 'major', but I have used 'speciality' (or 'specialism') as it is the term as translated in China. I have listed such courses for the early mechanical and electrical engineering diplomas elsewhere (McCormick, 1982, p.61).
11. In my interview with Vice-President Niu of CRTVU (17 May 1990) I put to him several changes in policy that I had detected in my visits to PRTVUs, one of which was the move away from the diploma programmes. He agreed that this was the case, but that the changes were from the State Education Commission and that the RTVU staff still saw the diploma programme as their basic task. He said that the CRTVU and PRTVUs had discussed this issue and agreed on this stance.
12. Hawkrige (1990, Table 4.1A) gives a table of specialities on offer in 1989 from data supplied by CRTVU, that includes some additional inservice and continuing education specialities. These have been added to Table 6.1.
13. One example given by the report is that the teacher training courses were withdrawn when the Television Teachers' College started. However, the courses were last offered in 1984 two years before the College was opened. Also demand is high in other distance learning systems (see Chapter 8).
14. Hawkrige (1990, Table 4.1A) lists six such courses sponsored by, for example, the State Audit Bureau, the Bank of China and the Ministry of Finance. Xiaoshan Branch School (Zhejiang) started a course on 'Equipment servicing' that is based upon a curriculum from the National Mechanical Commission and is taken by employees in township enterprises (interview 11 May 1990).

15. This commissioning also includes running courses that are of a more general nature when a local employer demands this. For example in Xiaoshan RTVU Branch School (Zhejiang) the local teachers' education bureau contracted the School to run two classes for junior middle school teachers in English and History to meet a local need in schools.
16. The information on Jiangsu PRTVU is taken from my interview of Vice-President Gu Tinggui and Tong Yuanhui and also the Jiangsu PRTVU commemorative book *1978-1988 Jiangsu dianda jiaoyuzhi*, (Guo, 1990, pp.2-4).
17. Interview of Vice-President Wang, Xiaoshan Branch School, Zhejiang (11 May 1990).
18. Jiangsu PRTVU established eight specialities in 1986 in both humanities and engineering, compared to the one national speciality (Guo, 1990, p.3).
19. Table 6.14 shows the number of CRTVU and local specialities offered in 1988 for the nine major PRTVUs that have broadcast-quality facilities.

Table 6.14: numbers of specialities for major PRTVUs in 1988

<i>PRTVU</i>	<i>CRTVU Specialities</i>	<i>PRTVU Specialities</i>	<i>Total</i>
Beijing	6	14	20
Guangdong	3	0	3
Hubei	13	15	28
Jiangsu	11	3	14
Liaoning	13	9	22
Shaanxi	11	11	22
Shanghai	8	7	15
Sichuan	4	2	6
Tianjin	3	0	3

Guangdong, Sichuan and Tianjin do not report their specialities in a detailed way, but use general categories or faculties. Jiangsu specifically lists two of its specialities as self-established (*zikai*).

20. Hawkrige (1990, Table 4.1B) gives a list of diploma courses developed by PRTVUs and those that have developed the most are: Guangdong, Henan, Jiangsu, and Tianjin; i.e. none of those in Table 6.2. The World Bank Project evaluation received only 55% replies to this question in its questionnaire.
21. Hawkrige (1990, p.22) says such nationally used specialities were made under contract to the CRTVU.
22. I saw the television programmes being made in Zhejiang PRTVU on a visit (10 May 1990) having been told of this joint venture in Jiangsu PRTVU (interview 7 May 1990).
23. Jiangsu PRTVU also has produced printed and video material for courses in Foreign Trade, Foreign Trade Management, and Management for Rural Industries (interview Jiangsu PRTVU, 7 May 1990).
24. *ZGJYB*, No.717, 29 June 1989, p.2; No.737, 15 August 1989, p.1. Also Mr. Quan Weigang, Deputy Director Adult Education, Zhejiang Provincial Education Commission, said there was no difference between the political education needs of conventional adult students, except that adults already had a better understanding of China's situation (interview 9 May 1990).
25. Students taking the agriculture diplomas study part-time for four years and obtain a two-year full-time equivalent diploma.
26. The figures used in this World Bank report were taken from questionnaire returns specifically collected by the evaluation team, rather than existing records for the RTVUs. As it turned out the CRTVU was compiling a book of PRTVUs statistics (*Xie & Li*, 1990) at the same time as the World Bank was collecting its figures. It is these CRTVU figures that I depend upon.

27. So, for example, some figures for admissions and graduates aggregate those who study full-time, part-time and spare-time, and when quoted at a national level do not give a breakdown by speciality or level of qualification.
28. This publication adopts a reasonably consistent reporting format for each PRTVU, but does not give any national figures. I have entered the data for each PRTVU onto a series of spreadsheets and derived the national statistics from these data. These statistics form the basis for Figures 6.4-6.7. There is, however, some discrepancy between other reports of aggregated data and these compiled statistics.
29. This could correspond to the surge in government policy in the previous year to encourage higher education development (see Chapter 3, p.34).
30. There was, however, a slight upturn in 1988 caused largely by an increase of single-course students (part-time or spare-time).
31. Most of these were on the political cadre inservice speciality.
32. The 1990 figure is given in *ZGJYB*, No.991, 19 March 1991, p.2. However, this figure is probably for full-time diploma students only, whereas those in Figures 6.4 & 6.5 include single-course students (part-time or spare-time). Hawkrige (1990, p.29) notes the probable underestimation in CRTVU statistics for 'non-registered' i.e. self-study students, and, combined with the general problem of records for CRTVU, it is not unreasonable to expect there to be general underestimation in earlier figures. The *Xie & Li* (1990) book being an official publication based on complete PRTVU returns *should* be the most definitive.
33. Graduation figures do not indicate whether students were full-time workers, etc, school leavers or self-study students. There are also two possibilities to the exact meaning of a 'graduate': a student who completes a programme, such as a diploma (*zhuanke*), or a student who completes a single course. Figures reported by CRTVU (undated, p.16) and reproduced in Hawkrige (1990, Table 5.1A) are separated according to whether they are 'all course' (*quanke*) or 'single course' (*danke*), whereas those in *Xie & Li* (1990) are not distinguished. However, a comparison of these two sources and Hawkrige (1990, Tables 5.1E & 5.1F) show the data in Figures 6.6 & 6.7 (and Appendix 3) appear to be 'all course' data.
34. These are taken from the summary admission figures from each PRTVU, unfortunately they do not correspond to the detailed speciality figures (i.e. non-aggregated figures) for school leavers for each PRTVU, nor do they match the State Education Commission figures (see note 35).
35. As noted in Table 4.13, another source gives a higher figure and this indicates 31,700 school leavers admitted to the RTVU, and this compounds the confusion over whether it was in 1985 or 1986 that school leavers were first officially admitted (see Chapter 4, note 61).
36. If the non-aggregated figures are used (see note 34), then in fact a decline is evident.
37. These problems were given by CRTVU Vice-President Niu in an interview (17 May 1990).
38. Interview with retired Vice-President Gu, of Jiangsu PRTVU (7 May 1990), and Vice-President Wang, of Xiaoshan Branch School, Hangzhou PRTVU, Zhejiang (11 May 1990).
39. Interview at CRTVU 17 May 1990.
40. This figure is based on the CRTVU statistics, but the graduate survey put the figure at 2.4% free-viewers and 9.1% organized free-viewers (CRTVU, 1990, p.5).
41. Guangdong also have a large proportion of self-study students, according to CRTVU Vice-President Niu (interview on 17 May), but their figures include self-study students in the totals for 'single course' students.
42. However, Hawkrige (1990, p.28) distinguishes part-time students, who take single courses, from self-study students, who take both single courses and diplomas.

43. Hawkrige (1990, p.30), and interview and observations in Hangzhou MRTVU (10 May 1990) and Xiaoshan Branch School (11 May 1990). The survey of graduates of 1982, 1983 and 1985 (CRTVU, 1990, p.14) and government graduation statistics of 1988 (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.90-1) give the following percentages:

	<i>Full-time</i>	<i>Part-time</i>	<i>Spare-time</i>
1982-5	72	15	9.6
1988	49	61	

Admissions of full-time students in 1988 were down to 27%. These figures indicate a swing away from full-time study.

44. In fact *Xie & Li* (1990) do not specify whether the figures are for completion, admissions or enrolments.
45. Comparing the figures for 1986 and 1988 with those given in Table 4.11 shows considerable differences (Figure 6.8 gives higher figures), illustrating the confusion over terminology, the variety of courses, and the addition of local courses.
46. More detailed figures for 1988 (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.100-101) show the breakdown in admissions (thousands) in terms of the type of students and their mode of study:

	<i>School leavers</i>	<i>Adults</i>	<i>Total</i>
<i>Full-time</i>	17.8	9.0	26.9
<i>Part/Spare-time</i>	74.8	49.2	97.0
<i>Total</i>	65.6	58.3	123.9

47. Added to this is the requirement of the State Education Commission for the RTVU to link with school audio-visual programmes (1989 State Education Commission tasks: *FBIS* JPRS-CAR-89-064, pp.66-72, 22 June 1989).
48. The figures in text taken from: *ZGJYB*, No.932, 20 November, 1990, p.4. As noted in Chapter 5 programme details are given in *ZGJYB* every two weeks.
49. The CRTVU's own publication states that 33 hours were transmitted per week 08:30-11:30 hrs and 13:30-16:10 hrs (CRTVU, undated, p.18). It is these programmes that have been transferred to Channel 2, which, as noted in Chapter 5, has been on trial transmission since 1988. However, CRTVU say they still use CCTV microwave on Channels 2 and 8 (2 hours on each), but that this represents a reduction in time.
50. I saw no evidence of it in places like Zhejiang and Jiangsu, although CRTVU programmes were available in Beijing on the local station. The World Bank Project evaluation notes the reluctance of local television authorities to re-transmit programmes, preferring to have general broadcasting, despite government policy insisting that they do so. Yu (1989, p.115) says that local stations resist re-transmitting central programmes.
51. Hawkrige (1990, p.12) gives figures of 185 installed for Sichuan, 79 for Guangdong and 37 for Hubei, compared with numbers of branch schools, workstations etc. of 77, 107 and 92 respectively (*Xie & Li*, 1990). Thus the ratio of equipment to centres is variable.
52. Interview at Xiaoshan, 11 May 1990.
53. Zhejiang PRTVU has produced programmes that have been used by CRTVU, and hence broadcast (Zhejiang PRTVU, 1989, p.4).
54. Zhejiang PRTVU produced courses in 'Business Forecasting and Market Investigation', 'Building Materials', 'Architectural Mechanics', 'English for General Use' and 'Tourist Industry Economics' (Zhejiang PRTVU, 1989a), in addition to the collaborative one on 'Tourism English'. Only the English and tourism courses could be described as either of local use or utilizing special local expertise, and then perhaps only in Jiangsu.

55. Visit and interviews 10 May 1990. There is a separate experimental centre that was said to have 24 laboratories, though I only visited three. The total area of buildings is 6750 m² (Xie & Li, 1990, p.376), compared to 7500 m² in the Xiaoshan Branch School, that is under its jurisdiction, and 19913 m² at the Zhejiang PRTVU headquarters.
56. This was evident in my interviews in 1982/3 in workstations in various parts of China (McCormick, 1985, p.40).
57. Xiaoshan Branch School had accommodation for 200 full-time students, plus another 50 short-term students (on short inservice training courses).
58. Visit and interviews 10 May 1990. The classrooms were, however, quite well utilized as far as I could see. This was not the case in Xiaoshan Branch School that was quite deserted, because students study in the evening. Zhejiang PRTVU also had some very sophisticated experimental equipment that was not for student use, and it appeared to be unused, a problem also found in the CRTVU (Hawkrige, 1990, p.17).
59. Xiaoshan Branch School paid 0.70 yuan per student per day for laboratories in local factories; the Zhejiang PRTVU also has to be paid for use of its laboratories by workstations and branch schools. The World Bank Project evaluation did not publish any data on equipment utilization, but generally welcomed any moves to increase the amount of practical work that could be done (Hawkrige, 1990, p.17).
60. This study was completed as part of the work for this thesis but it will be quoted from in the same way as other published work.
61. It is not appropriate here to evaluate their methodologies, but a few comments are in order. The study in Foshan ("a") was a small scale one combining interviews with a very crude survey, but contains some detailed evidence of students' views on study with the RTVU. (See McCormick (1985) and Appendix 1 for a discussion of the limitations of this study.) The data in the larger report of which it formed part (McCormick, 1983) was also the result of small samples at a few workstations and branch school in various parts of China. The survey from the CRTVU Distance Education Research Office ("b") involved two large groups of students (851 and 1876) from 'Science and Engineering' and 'Chinese' and 'Law' specialities in seven PRTVUs. The sample surveyed was not structured to reflect the national population of students but a good response rate was obtained such that the sample matched some of the characteristics (sex, work status, registered student status, educational level on entry) of the stratified sample in the graduate study ("c"). It included a wide range of questions relating to study at the RTVU, but it contained a number of faults in questionnaire design that resulted in numbers of respondents to some questions being difficult to interpret. The graduate survey ("c") covered three graduation years (1982, 1983 & 1985) with about 10,000 respondents representing a response rate of 80%. It was accompanied by a survey of the students' work units (847), and responses matched and weighted. Indeed the statistical analysis was extremely sophisticated, but unfortunately let down by some aspects of the questionnaire design. This survey contained more general information and only incidentally dealt with study issues.
62. In fact these figures are taken from McCormick (1983, p.10) associated with the Foshan study. It is likely that the figure for self-study includes the students' work on assignments. The figure given for "face-to-face" is actually for local courses, face-to-face being distinguished from tutorials that are also face-to-face but do not in theory present new material.
63. The amount of television viewing has dropped, reflecting a change in CRTVU policy. This has probably been brought on by limitations in transmission time.
64. For example, the fact that television and tutorials do not help with self-study was one of the main reasons for not viewing or attending, respectively; 70% of students prefer to study at their own pace (*Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi*, 1988, pp.10, 12 & 16). The discussion and recommendations for this survey also point out the importance of self-study, and indeed the strength of RTVU students that they use it (p.34).
65. The tutors at this branch school said that few students were good at self-study, and, along with the fact that we interviewed in depth mainly the better students, it could be that poorer students did not realize

the importance of self-study. It may be that this is so, but the figure given in note 64 indicates that it is the majority (70%) who realize its importance.

66. In the CRTVU DERO study the main reasons for students not viewing television were that they were 'short of time' and that it 'did not help self-study' (1988, pp.10 & 24) and for not attending tutorials the main reasons were 'doesn't help with self-study' and 'main points not stressed'.
67. The large number of television programmes per course laid down by the State Education Commission to ensure quality, have in fact reflected a conventional view of a lecture series for a course. In 1983, while I was running a course on distance learning material development, it was said that CRTVU could not change the style of programmes to make them more appropriate and reduce the number because of the State Education Commission's idea of quality.
68. These were the kinds of aspects I summarized for CRTVU from the Foshan study (McCormick, 1983, pp.13), that are also reported in various parts of McCormick (1985).
69. They may not see assessment and learning as linked, i.e. that completing assessment may itself be a learning activity. In distance learning such an approach is important to aid students who are usually working on their own and need activities and feedback on these activities to support their learning.
70. The survey results indicating a preference for group viewing (but for completion of assignments outside class) was made in 1986, after the transmission times of television programmes had moved to the evening. This could tend to encourage individual study as less of a classroom ethos is built up.
71. The graduate survey said 59.4% were workers, 12.5% cadres, 12.3% worker-cadres, 2.8% technicians, 5.1% teachers and 2.4% office workers (CRTVU, 1990, p.10).
72. This was an argument made by the government for adult learners in general (see Chapter 4).
73. This was one of the problems with the questionnaire I noted earlier (note 61). It was compounded by employers being asked to apply different ratings before and after graduation!
74. For example at Nanjing Optical Factory, 15 January 1983.
75. Conventional practical work also helps with this but it is unlikely to be any different from that in conventional institutions, and I have already noted a number of difficulties that exist with these institutions.
76. Visit 28 June, 1983.
77. This process was described by staff at the Xiaguan District Workstation in Nanjing, Jiangsu PRTVU (visit 15 January, 1983).
78. In fact this was laid down as a matter of course policy by the CRTVU for those not based in production jobs, but I have not come across any other examples of it (*World Bank Project Proposals (draft)*, CRTVU, Beijing, January 1982).
79. This was given in an interview with staff during a study of student learning (21-23 June, 1983), and also is specifically mentioned in the notes on teaching plans for the Foshan Branch School (*Guanyu wo shi dianda yijiubaling ji quankeban jiaoxue jihua de shishi yijian (Implementation notes concerning our city RTVU 1980 intake teaching plans for all specialities)*, Foshan, 26 November 1982).
80. This is recognised in course policy when it is acknowledged that "There is a large jump between learning the basic theories and completing a graduation design - from knowledge to application." (*World Bank Project Proposals (draft)*, CRTVU, Beijing, January 1982).
81. See Yao (1972, pp132-3) for an account of this in science and engineering education.
82. There I saw examples of the design of an overhead crane and a transmission box (visit 28 June, 1983).

83. Information obtained in 1983 at Foshan indicated that the time allocated had been increased from 50 days in 1982 to 70 days in 1983. However, Xiaoshan Branch School staff gave a figure of four weeks, and Zhejiang PRTVU said eight weeks (visits 10 & 11 May, 1990).
84. This is the case in the *Zhongyang guangbo dianshi daxue yuan jili jiaoyu yanjiushi* survey (1988, p.17), where the lack of match of speciality to job was not an important reason for lack of support. The graduate study is not so clear cut, with a third of students indicating a lack of match as a reason for no employer support. (This information was contained in the tables of a Chinese draft of the graduate survey, but it was not included in the published version.)
85. Again these figures come from the draft of the graduates survey (see note 84).
86. However, it is important to recognise that the question options did not distinguish clearly the level of qualification and the speciality.
87. The remainder of this sub-section is an updated version of McCormick (1986, pp.79-80).
88. It is laid down by the former Ministry of Education and promulgated by the State Council (*Liaoning dianda* (*Liaoning RTVU*) (magazine), August 1982, p.3; *State Council Bulletin*, No.12, 1983, pp.559-600).
89. The promulgation referenced in note 88 refers to an earlier *Bulletin* (1980, No.120) giving these conditions, but I have been unable to trace it. The "No.120" presumably refers to the reference number of the specific promulgation, not the whole *Bulletin*, but these reference numbers do not appear to be printed on *Bulletins* before 1982.
90. They can, however, be contracted to an enterprise on entering the RTVU and this guarantees them a job (interviews at Xiaoshan Branch School, 11 May, 1990, and Jiangsu PRTVU, Nanjing, 7 May, 1990).
91. *Liaoning dianda*, August 1982, p.3.
92. Interview at Jiangsu PRTVU, Nanjing, 7 May, 1990.
93. The regulations (referenced in note 88) allow for a unit to "report to the department above for arrangement of transfer and placement" of graduates in this position, but no one I interviewed mentioned this possibility.
94. The question does not talk specifically about 'quality' (*zhiliang*), though it is given as the lowest rating in the scale: 'quality comparatively poor' (*zhiliang jiao cha*). This differs from the other ratings that talk about 'confidence' (*xinren*).
95. There are also the disabled, but there is little information on them. In 1989 the RTVU and correspondence education had 40,000 such students, but the split between the two systems is unknown (SWB FE/0455 B2/6, 12 May 1989). This figure represents about 4% of enrolment in the two systems.
96. This distribution was found by comparing the administrative divisions (Cartographic Publishing House, 1981, pp.95-9) with the details of MRTVUs, branch schools and workstations given by the RTVU (*Xie & Li*, 1990, pp.919-957).
97. Interview with President of Yunnan PRTVU (and head of provincial adult education department), 25 June 1983.
98. The following discussion is based on that given during an interview with four senior staff of CRTVU, including Vice-President Niu. It occurred because I asked why self-study students ('free viewers') could not be admitted as they cost the state nothing.
99. In fact in May 1990 CRTVU staff said these documents had not been issued, but that they had been promised in a speech by Wang Mingda, a Vice-Premier of the State Education Commission.

100. Given the fluctuations in the admissions calculating the balance of fields of study (humanities, science and engineering, and economics and management) gives an unreliable indication of the RTVU contribution. The absolute figures are therefore the best guide.
101. These figures are given in the *World Bank Proposals* (draft), Beijing, CRTVU, 1983. They also include 4-5000 yuan per student for capital costs of conventional universities, which, it is claimed, are likely to be much higher than anything achieved by the RTVU.
102. For example Wang (1984, p.156), a former Acting President of CRTVU, says that a RTVU *graduate*, who studied full-time would be two-thirds the cost of a conventional university graduate. This figure bears no relationship to the one quoted earlier from the Dean, Zhao Yuhui. Yu (1986, p.98) gives an annual student cost for a county branch school in the suburbs of Shanghai as 100 yuan, compared with 900 yuan for a trainee to be sent to conventional college.
103. Whenever I have visited RTVU centres numbers of staff, lists of equipment, and floor area are always given spontaneously. The tenth-anniversary book of the RTVU includes the floor area of *every* building associated with the university, from PRTVUs downwards (Xie & Li, 1990).
104. For example, when I gave a brief description of the British Open University to the education department chief in the Iron and Steel works in Yunnan, he said "Oh you mean a correspondence college!" (Interview 28 June, 1983.) There was of course an element of truth in his observation, but it revealed that he saw the Open University as quite different from the RTVU.
105. In addition to the example of Xiaoshan Branch School I gave earlier, Hangzhou MRTVU only uses its laboratories for 24 hours per week, partly because of the switch away from science and engineering specialities. The increase in secondary vocational students will help to improve the utilization, but the equipment in them is too sophisticated for their needs.
106. The number of part-time teaching staff should be directly related to the number of students, and hence affect the variable cost, whereas this is less likely to be so for administrative staff. I will consider part-time staff in the next sub-section.
107. The admission figures are taken from CRTVU (undated) and Table 6.1. Because of the lack of clarity of what is included in admission figures, discussed earlier in the chapter, I have used only 'all-course' student admissions. Using total admissions (without allowing for full-time equivalents) does not alter the argument.
108. Taken from Guo (1990, pp.6-10).
109. Using *enrolment* figures from Zhejiang PRTVU (undated) the ratio varies from 1000 students per speciality in 1979 to a peak of 3400 in 1984 and falling to 100 in 1987!
110. In my report in 1983 (McCormick, 1983, pp.3-4) I was worried about the figures of 1:3, 1:9, 1:14, 1:17 and 1:18 being given by branch schools and workstations, and it is reassuring to see that this is not a threat.
111. The World Bank Project evaluation (Hawkrige, 1990, p.15) expressed concern about the level of expenditure on maintenance of audio-visual recording, copying and replay equipment and recommended an increase in funds - a further threat!
112. This is a call the government has made a number of times, including in the 1988 regulations. Most recently He Dongchang urged the RTVU to increase co-operation in a foreword to the tenth-anniversary book (Xie & Li, 1990, p.4). I will examine this in detail in Chapters 8 & 9.
113. The 1988 regulations lay down establishment standards (*shezhi biao zhun*) on full-time staff for workstations and also buildings, library material and apparatus. To be fair the regulations recognise that it is possible to rent facilities, as long as they are relatively stable arrangements (Guan, 1989, pp.304-5).

CHAPTER 7 CORRESPONDENCE EDUCATION

INTRODUCTION

Chapter 4 has already indicated that correspondence education has grown to be the largest of the distance learning systems that offer diploma and degree qualifications. It also has the longest history of the systems in China, with the first indigenous institution being set up in Shanghai in 1914: the Commercial Publishing House Correspondence Society that offered degrees (*benke*) in English as well as selected courses (*Guan*, 1989, p.602-3).¹ However, it was not until the post-liberation period that higher correspondence education developed to any significant extent. Despite this long history, it was not until the late 1980s that correspondence education had developed in total size to exceed the RTVU, a relative upstart. I will show that its wide range of programmes and high numbers of students have not been matched by the development of the teaching and learning methods of the system.

Few western scholars have documented the development of correspondence education.² The first part of the chapter will therefore attempt to give an overview of policy development, and the second part will consider the institutions that make up correspondence education in higher education. The third part will take up an examination of the promise of correspondence education, as was done for the RTVU in Chapter 6, using the headings of learning, access, economic development and cost effectiveness. In the final part of the chapter I will consider the development and role of correspondence education in terms of its structure, the model of distance learning that it encapsulates, and how it contributes to higher education in China.

AN OVERVIEW OF CORRESPONDENCE EDUCATION

First I will give a brief account of the period up to the end of the Cultural Revolution in 1976, and then a chronology of the development of policy from liberation to the present day.³

Correspondence education from liberation to the Cultural Revolution

In the early 1950s higher correspondence education began to develop mainly to supply trained teachers for primary and middle school to support the general development of the education system. By 1957 its role and capacity had developed to include industrial education for workers, including economic management, and law. But it was not until 1962 that any real attempt was made to widen it to rural higher education. Table 7.1 shows the rapid development of the number of higher education institutions that offered correspondence education and the associated enrolments. The Cultural Revolution brought a halt to this development, along with the general disruption to higher education. Chambers (1980, Chapter 8) focuses upon rural correspondence education during the Cultural Revolution, which had the main function of serving the youth who had been sent down to the countryside from the cities. This involved teaching them courses relevant to rural life (e.g. irrigation), but also politics.⁴ In 1973, at the same time as the increasing worries about the state of science in higher education, some universities resumed higher correspondence education for school teachers.

Table 7.1: the number of institutions and students enrolled in higher correspondence education provided by conventional universities 1957-65

<i>Year</i>	1957	1962	1965
<i>No. HE institutions</i>	36	122	123
<i>Enrolment</i>	35,000	124,000	132,000

Source: *Zhongguo jiaoyu nianjian bianjibu*, 1984, p.605

The chronology of policy development

As with other areas of education the government has held a number of conferences and issued a stream of notices and regulations since 1949 covering correspondence education in conventional universities. These have usually been associated with both correspondence education and evening universities (*yedaxue*), as together they are seen as the conventional higher education system's contribution to adult education. In the context of this thesis it is sufficient to summarize this policy development in the form of a

chronology, and following that I will pick out the important elements that are relevant today.

- 1953 North-China area meeting of all higher education institutions: first formal recognition of the role of correspondence education in higher education.

Chinese People's University (*Zhongguo Renmin Daxue*) set up a correspondence education department.⁵

- 1956 Ministry of Education notice on the setting up of correspondence education in a number of the larger universities such as Fudan and Beijing, and admission plans of correspondence education and evening university students for all teacher training universities approved.

- 1957 Main regulations on spare-time education that laid down the correspondence education study pattern that largely pertains today.⁶

- 1963 Concern to open out correspondence education to rural areas as well as industry; the Ministry of Education issued more regulations to strengthen correspondence education in conventional universities (as well as secondary technical and vocational schools).

- 1965 Conference convened to discuss problems and to stress research and serving the rural areas.⁷

- 1980 April: conference to discuss the tasks and important problems in correspondence education and evening universities and to exchange experiences (*Zhou*, 1988b, p.271).

September: State Council and the Ministry of Education issued a notice of their opinions on correspondence education and evening universities in conventional higher education institutions (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.905-6). Set target for correspondence education and evening universities of a third of all the students enrolled in conventional higher education.⁸

- 1981 April: meeting of those in the State Council responsible for the Ministry of Industry's correspondence education.

August: Ministry of Education gave its guidelines for the degree (*benke*) teaching plans of industrial university correspondence education that were much the same as the 1957 regulations.⁹

December: Ministry of Education regulations on approval procedures for setting up correspondence education and evening universities in conventional institutions.

- 1983 Specific regulations on graduation criteria and conditions for the recognition of qualifications.¹⁰
- 1985 First symposium on the management of higher correspondence education in conventional institutions; it considered the problem of a lack of experienced managerial staff and the related issue of the number of full-time teaching staff (Zhou, 1986).
Conference convened by the State Education Commission (Zhou, 1987 & 1988c, p.451).
- 1987 The 1985 State Education Commission conference resulted in regulations.¹¹
- 1988 Regulations on the decentralization of the authority of approval of specialities for conventional universities' correspondence education and evening universities (*Zhongguo jiaoyu nianjian bianjibu*, 1990, p.245-6).

Most of the regulations in 1987 reiterate statements that can be found in the 1980 document, and indeed in the 1957 regulations. Thus, for example, they stress the importance of correspondence education, call for it to be part of the recruitment plans of universities, lay out the overall study components (self-study, assignments etc.), require the establishment of an independent teaching group for correspondence education, and lay down that funds should be provided by the organization or department who administers the university or the correspondence education tutorial centre.

The study pattern for degree study (*benke*) in the 1981 regulations resembled those of the 1957 regulations (the latter in parenthesis where they differ):

six years of study with 45 (38-40) weeks per year, 5 (4) weeks to prepare for examinations and 8-10 weeks holiday (from study);

each week the self-study will take about 18 (16-18) hours, depending upon the speciality;

5 (6-8) weeks of 40 hours per week released from production (*tuochan*) to attend college for face-to-face tuition, doing experimental work and examinations;

5 (6) months released from production at the end of the degree programme to complete the graduation design or thesis.

The employing unit was supposed to give the student four hours per week for study, and to reduce other work (outside working hours), along with paying expenses for attending college. Total study time was to be 5500 hours.

The 1987 regulations do, however, add some new elements not found in earlier documents. Most importantly they talk about the improvement in cost effectiveness that correspondence education brings to universities, and the fact that it can expand their provision of higher education places (para.1). This is linked to the fact that unemployed youth (*zhishi qingnian*) with senior secondary school graduation can be admitted, as in 1980, but also school leavers from the previous year (*yingjie gaozhong biyesheng*). These recent school leavers can only be admitted with the approval of the department who administers the university and the State Education Commission (para.18). Along with the general concern for continuing education in that period the 1987 regulations also included continuing education for university graduates who were employed.

An interesting condition for establishing correspondence education is added to these regulations, namely that the university must have more than 2,000 students and have run for conventional students the speciality offered by correspondence education for two cohorts of graduates (para.3).¹² The need for co-ordination among the various ministries of the State Council and provincial education commissions was also stressed, both in terms of the specialities set up and the students recruited (para.6).

Although the usual description of the various components of the teaching and learning system of correspondence education was the same as in earlier documents, a stipulation was placed on the amount of time for experiments and fieldwork under the tutor's guidance. This was to amount to about 30% of the total study time of the equivalent higher educational level and speciality (para.11).¹³ Rather than talk about students being 'red and expert' as was done in the pre-Cultural Revolution documents, and indeed even in the 1980 one, all that remains of such ideas is an emphasis on theory and practice and the concern for ideological awareness on the part of students (para.19), and the ideological assessment of a student as part of graduation requirements (para.23). The newest item in the regulations is the need for staff to carry out research, especially on teaching and learning in correspondence education.

In 1979 the development of higher correspondence education by conventional universities was accompanied by a number of other kinds of correspondence education institutions. In

the next part of the chapter I will deal with the range of such institutions, including some examples of them. At the end of this part I will attempt to estimate the total size of the higher correspondence education provision and the relative size of the various sections within it.

THE MAIN FORMS OF CORRESPONDENCE EDUCATION

I have already indicated that correspondence education developed by conventional universities and colleges is the main form, at least as far as the government is concerned.¹⁴ I will adopt a similar approach to Bruckner (1970) using a classification of institutions, based on who sponsors the institutions:

- a conventional higher education institutions;
- b Ministries other than the State Education Commission;
- c non-governmental bodies such as science and technical societies.

I will use these categories in my account of correspondence education in the period since the fall of the 'Gang of Four', by considering correspondence education in conventional universities and then other institutions, namely: those run by ministries, independent correspondence education institutions, and those run by non-governmental organizations. The fact that neither the State Education Commission, nor any of its provincial, etc., counterparts, runs many of the institutions of correspondence education means that obtaining global statistics for the size of higher correspondence education is difficult. I will therefore try and give an overview of the total size of this form of distance learning. At times it is only possible to discuss representative institutions of each of the categories, because no overall view can be obtained.

CORRESPONDENCE EDUCATION IN CONVENTIONAL UNIVERSITIES

Introduction

Not surprisingly the kind of correspondence education offered reflects the various kinds of universities and colleges. Historically, as I have indicated, correspondence education was initially developed for school teacher education, particularly for those in secondary schools. These courses were, and continue to be, based in the teacher training universities and colleges (*shifan daxue*). All types of universities have developed correspondence education including those specializing in science and technology, social science and, to a lesser extent, agriculture. Examples of higher correspondence education in agricultural universities are not available, and in this section I will focus on the other three kinds, namely teacher training, science and technology, and social science.

The previous section has already documented the development of policy and regulations for correspondence education that mainly apply to universities. Accompanying this there has been a development in the size of the student body and in the number of institutions involved. Although as I noted earlier there are no global statistics for correspondence education in general, it is possible to give statistics as recorded by the State Education Commission for correspondence education run by conventional universities. Table 7.2 (overleaf) shows the number of conventional universities with correspondence education and the associated student statistics.

Tables 7.2 confirms the growth shown in Chapter 4 (Table 4.3), such that conventional higher education institutions had, by 1990, become the largest contributor to adult higher education, having overtaken the RTVU. The 1990 enrolment figure for the RTVU is 314,400, only sixty percent of the figure for those in higher correspondence education in conventional universities and colleges (excluding those in evening universities run by conventional universities). As I have noted, however, there are a number of other institutions and in later sections I will attempt to see how their size relates to that of correspondence education in conventional universities.

Table 7.2: student statistics (thousands) and number of conventional universities with departments of correspondence education, 1979-90

<i>Year</i>	<i>No. of instit.</i>	<i>Enrolment</i>	<i>Admissions</i>	<i>Graduates</i>
1979	72	241	n.a.	n.a
1980	93 ¹⁵	162	54	12
1981	117 ¹⁶	189	45	5
1982	128	155	29	29
1983	155	205	66	11
1984	172 ¹⁷	244	93	41
1985	300 ¹⁸	364	172	50
1986	331 ¹⁹	415	112	53
1987	500	500	128	76
1988	n.a.	478	189	150
1989	n.a.	n.a.	n.a.	n.a.
1990	634	520	149	113

Sources: 1979 - *Zhongguo jiaoyu nianjian bianjibu*, 1984, p.606); 1980-85 - Department of Planning, SEC (1986, pp.94-9), Department of Planning, Ministry of Education, (1984, p.244); 1986 - *Guan* (1989, pp.754-5); 1987 - Zhou (1988, p.450) & *Guan* (1989, pp.764-5); 1988 - *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.32); 1990 - ZGJYB, No. 991, 19 March 1991, p.2, ZGJYB, No.1005, 13 April, 1991, p.3.

In the next two sub-sections I will look at the two sectors that make up university correspondence education, namely that in teacher training universities for teachers, and that for adults in general in other kinds of universities.

Teacher training universities

As was the case in the early 1950s correspondence education in teacher training universities (*shifan daxue*) after the Cultural Revolution offered secondary and primary school teachers courses to improve their qualifications. In the late 1970s and early 1980s this was part of the general restoration of education in the aftermath of the fall of the 'Gang of Four'. But as indicated in Chapter 3 the introduction of the requirements for 9-year compulsory education intensified the need for qualified teachers. The 1982

regulations from the State Education Commission on the teaching plans for primary, junior secondary and senior secondary school teachers all included provision for correspondence education. In the initial stages the attempt to improve the qualifications of teachers inevitably focused upon improving their subject knowledge, particularly for secondary school teachers, and certainly correspondence education reflected this. But as basic qualifications improved so inservice education, focusing upon pedagogic issues, became more important. The advent of the Television Teachers' College, with its concentration on pedagogy is a recognition of this, but it is only one of many methods. Each province is likely to have such varied needs that no single solution will be adequate. Similarly, the need for training vocational and technical teachers, as part of the development of this relatively new sector of education, is not something that correspondence education, or indeed distance learning in general, will be well suited to.²⁰

Chapter 3 (p.35) has already tried to gauge the extent of the task for distance learning in the area of teacher training, estimating some 1.7 million junior and secondary teachers and 1.45 million primary school teachers that were unqualified in 1990. Given that primary school teachers are only qualified up to middle teacher training level, it is only the junior and senior secondary school teachers who will be part of the correspondence education provided by universities.²¹ The estimate for the number of these actually studying by correspondence education in 1990 is about 200,000, which represents about the number to be trained in the period 1990-95 (Chapter 3, p.35).²² Assuming that all these are studying through correspondence education in universities, teachers account for about 40% of all the 1990 enrolment in university correspondence education degree and diploma programmes. Very few national reports are given of the number of teachers training by correspondence education in universities, so it is difficult to be more precise about how it fits in to the scale of correspondence education provision. This lack of national reporting reflects the local nature of this kind of training. However, a rough guide can be taken from an analysis of fields of study of graduates, that I will carry out when I consider correspondence education's contribution to economic development.

This local nature is shown in a number of aspects of the correspondence education teacher training provision. Firstly, teacher training has to be seen within the context of a local area, usually a province. Thus the Provincial Education Commission will plan teacher training in the context of all the provision available. In Hunan province, for example there are six different approaches for primary school teachers:

- a study completely by correspondence education (middle school teacher training) without any release from their teaching load and no concentrated face-to-face;
- b study partly by correspondence education (middle school teacher training), but also have some release from their job to attend concentrated face-to-face;
- c full-time conventional middle teacher training school run by province or local district education office;
- d full-time conventional middle school teacher training set up 'by the people' (*minban*), i.e. not by the public authorities;
- e study through the Television Teachers' College;
- f junior correspondence education studied in spare time.²³

Secondly, the requirements for distance learning approaches differ in areas with different geographical conditions and different amounts of conventional teacher training provision. As noted in Chapter 5 (p.130), a province like Xinjiang with scattered urban areas will be more attracted to using distance learning systems such as the Television Teachers' College than Guangdong. Guangdong is more likely to use its existing network of institutions to provide both conventional and correspondence education training of teachers.²⁴ It is also true that teachers in rural areas are more likely to use correspondence education because of the lack of local institutions, and conversely those in urban areas evening universities. Correspondence education is an important means for training in rural areas. A small school with say two teachers is more common in rural areas and the removal of a teacher to go to full-time training would be difficult to arrange, especially given the shortage of teachers willing to go to rural areas and the inevitable disruption of a temporary change.²⁵

Thirdly, the administrative level of the institution determines the area served by the college or university. County-run institutions (usually for primary school teachers) serve the county, provincial-run ones the provinces and those run by the State Education Commission cover several provinces. Examples of the latter type are institutions like: South China (*Huanan*), Central China (*Huazhong*), and East China (*Huadong*) Teacher

Training Universities.²⁶ The East China Teacher Training University serves the provinces of Shandong, Anhui, Jiangsu, Zhejiang and Fujian, along with the city of Shanghai, where it is located. It has nine correspondence education stations in these areas to provide face-to-face tuition and experimental work for students in the locality.²⁷

Fourthly, there are even examples of a local curriculum being created, though this is only at county or city level and restricted to primary school level training.²⁸ Courses for the nationally recognised qualifications are laid down by the State Education Commission, and it is these that form the bulk of the work of teacher training universities' correspondence education programmes.

The 1982 national teaching plans for both primary and secondary school teacher training included the details for study by correspondence education (*Guan*, 1989, pp.117-35).

Existing secondary school teachers following a correspondence education three-year diploma (*zhuanke*) are expected to do the following:

38-40 weeks per year, and ten hours per week, although four hours of this is taken to be their time teaching in school;

30 days per year (540 hours) attending a centre in concentrated periods (of two or three weeks) for face-to-face teaching, tutorials and experimental work;

each of these days involves six hours of lectures etc. and two hours of self-study.

The total study time is approximately 1800 hours, of which 1300 hours is self-study. This compares with 1400 hours for the two-year full-time diploma, and 1100 hours for the three-year spare-time, evening university diploma.²⁹ The 1986 regulations on the 'professional qualification certificate' (*zhuanke hege zhengshu*) define the requirements for junior secondary school teachers as diploma level (*zhuanke*), and senior secondary school teachers as degree level (*benke*) (*Guan*, 1989, pp.151-3). (This preceded the 'professional certificate' introduced in general adult education in 1988; Chapter 4, p.75.)

Not surprisingly the specialities reflect the requirements of the secondary school curriculum, but English, physical education, music and art specialities are not allowed to be done by correspondence education. Thus secondary school teachers can study only politics, Chinese language, history, mathematics, physics, chemistry, biology and geography through correspondence education.³⁰ The diplomas and degrees offered by the

teacher training universities through correspondence education include these specialities, though some include others such as computing.³¹

Correspondence education in Science and Technology and Social Science universities

I have already estimated that about 40% of those enrolled in university correspondence education are teachers, leaving the majority as other adults, and to a lesser extent recent school graduates, studying a variety of subjects in correspondence education departments run by non-teacher training universities. Given that some of the specialities studied by teachers are general ones, such as physics, it is likely that teachers and non-teachers will be studying on the same courses, although the regulations do require special ones for teachers. It is also true to say that the teacher training universities offer diploma and degree programmes specifically for non-teachers.³²

The regulations and developments in university correspondence education have already been covered, and in this section I want to consider the two major types of universities that offer correspondence education for adults in general, namely social science universities and science and technology universities. There is no general information on correspondence education in these universities so I will do this by considering two well known examples of these institutions, the Chinese People's University (*Zhongguo Renmin Daxue*) in Beijing, and Tongji University (*Tongji Daxue*) in Shanghai.³³ They are amongst the largest, and operate in several provinces, and hence are the nearest to national organizations that exist in this sector of correspondence education.

The Chinese People's University, or *Renda* as it is known in China, was established in 1951 in Beijing, and shortly afterwards in 1952 the correspondence education department was opened with students starting study in February 1953.³⁴ In keeping with the fact that *Renda* was set up as the premier institution for marxist social sciences under the new communist government, the courses were in such areas as the theory of marxism, philosophy, law, industrial economics, industrial accountancy and finance. By 1956 three full degree (*benke*) specialisms were available in industrial economics, trade economics, and law. In 1959 a Correspondence Education Institute was set up within *Renda* indicating its establishment as a recognized part of the University's provision.³⁵ The

statistics for this period are not very complete but they include admissions at around 3,000 per year and graduates at about 2,000 per year (*Guan*, 1989, p.603 & 605; Bruckner, 1970, p.162). The importance of *Renda* is that it serves more than the local area of Beijing, and in the early years it recruited students from Tianjin and Taiyuan. Zhou (1984, p.354) claims that there were forty correspondence education centres in the north, east and northeast of China by 1966.

After the disruption of the Cultural Revolution *Renda* resumed its correspondence education in 1980, and Table 7.3 shows that the number of graduates has not yet reached pre-Cultural Revolution levels. The figures show a slow growth, with a decline in the most recent figures for admissions reflecting a trend that I have noted in correspondence education in general (Table 7.2).

Table 7.3: correspondence education student admissions, enrolment and graduations (thousands) in the People's University in selected years 1982-90

<i>Year</i>	<i>Admissions</i>	<i>Enrolment</i>	<i>Graduates</i>
1982	n.a	2.6	n.a.
1983	2.8	5	1
1984	4 ³⁶	7	0.5 ³⁷
1986	n.a.	n.a.	0.5 ³⁸
1988	n.a.	n.a.	0.6
1990	3	8	1

Sources: 1982 - *CD*, 23 November 1982; 1983 - *RMRB*, 19 May 1983, p.2 & Zhou (1984, p.353); 1984 - Zhou (1984, p.354) & *RMRB*, 24 July 1984, p.3; 1986 - *RMRB*, 29 January 1986, p.3; 1988 - *ZGJYB*, No.752, 19 September 1989, p.1; 1990 - Zhou Jianshu, interview 19 May 1990.³⁹

The number of graduates between 1980 and 1989 is put at 11,000 giving an average of 1,100 per year (*Guan*, 1989, p.603).⁴⁰ The small number of graduates is a puzzle given a course pass rate of 95%; such a rate should ensure a reasonable through-put and certainly a higher one than Table 7.3 suggests.

The claim that *Renda* is a national institution for correspondence education is only partially true. True it operates in most provinces, with seven correspondence education

offices and over twenty correspondence education centres,⁴¹ but the student numbers are so low as to mean that perhaps there will be as few as forty students in one province studying one subject. In fact it is likely that a large proportion of students will be in Beijing and its surrounds, thus the number in other provinces will be very small. Given that over 600 higher education institutions offer correspondence education the demand for a national institution is likely to be low, whatever the quality and experience that *Renda* undoubtedly has. Nevertheless the demand for places is high with only a third of those sitting the entrance examination being admitted.⁴²

The specialities are the same as before the Cultural Revolution, though there seem to be a number of special ones laid on; for example a Marxist-Leninist theory course for People's Liberation Army soldiers, and a journalism course run in conjunction with *Gongren Ribao* (*Workers' Daily*).⁴³ Again with the increase in concern for continuing education and inservice, courses have been developed to meet this policy change.

Given that the regulations stress having full-time correspondence education staff *Renda* is fortunate to have 100 full-time staff and 150 part-time staff. It does not use teaching staff in the correspondence education centres, but sends its central staff to give face-to-face tuition. Each teacher has to look after one or two centres, and fifty students.⁴⁴ All assignments are dealt with by such staff using postal communication.

Tongji University (*Tongji*) is a leading science and technology university based in Shanghai, and its correspondence education department reflects this leading position (Lin & Zhang, 1988, pp.75-81). The correspondence education department was started in 1956, but there is little information available on the pre-Cultural Revolution period. It was the first university to resume correspondence education after the Cultural Revolution,⁴⁵ with an intake of 124 students in 1978. In fact there was also a cohort of 46 who had entered *Tongji* before 1962, and who graduated with the 1978 cohort in 1983, their education having been disrupted by the Cultural Revolution (*Tongji daxue yeyu jiaoyu chu*, 1984, p.1). There are few statistics available, and no recent ones, but Table 7.4 shows the modest size of *Tongji* correspondence education department. The aim is to

reach a ratio of 2:1 conventional to correspondence education students by 1990, but figures of around 3-4:1 in the mid-1980s mean there is still some way to go.⁴⁶

Table 7.4: Tongji University correspondence education student admissions, enrolment and graduation for selected years 1978-84

<i>Year</i>	1978	1979	1980	1983	1984
<i>Admissions</i>	156	600	600	n.a.	613
<i>Enrolment</i>	n.a.	n.a.	1000	n.a.	3000
<i>Graduates</i>	-	-	-	124	n.a.

Sources: 1978, 1979, 1983 & 1984 (admissions) - *Tongji daxue yeyu jiaoyu chu* (1984, pp.6, 10 & 36); 1980 - *RMRB*, 29 May 1980, p.5; 1984 (enrolment)- *Tongji daxue hanshou bu* (1984a, p.1).

The criteria for admission is that potential students should be under 35 years of age, have worked for two years, have sound physical health and political and ideological thinking, and apply to study a speciality that matches their job (*Tongji daxue hanshou bu*, 1984b, p.7). They of course have to take an entrance examination, and did so even before the introduction of the unified adult higher education entrance examination. Success rates of 10-17% are, however, much less than the general rate for adult higher education (Table 4.3) or for conventional higher education (Table 3.9).⁴⁷

The programmes of courses are exclusively for degrees (*benke*), and in the first intake there were two specialities (Industrial and Civil Construction).⁴⁸ By 1984 this had become seven specialities: Industrial and civil construction, Water supply and sewerage, Heating and ventilation, Road engineering, Bridge engineering, Engineering surveying and Industrial automation (*Tongji daxue hanshou bu*, 1984b, p.1). In 1984 there was hope of introducing a Master's programme (*Tongji daxue hanshou bu*, 1984a, p.4), but no recent information is available on this. For the first intakes a degree (*benke*) programme took five and half years, but in 1981 this was increased to six years in line with the national regulations (*Tongji daxue yeyu jiaoyu chu*, 1984, p.7).

Like *Renda* Tongji University correspondence education department serves the surrounding provinces, as well as Shanghai, although when it resumed in 1980 it served

only Shanghai. By 1984 it had nine correspondence education centres in the six provinces Jiangsu, Anhui, Zhejiang, Jiangxi, Fujian and Shandong (where it had a branch school). This area includes 45 cities, 155 counties and some 1236 work units, but with most of the few thousand students actually being in Shanghai it meant a thin distribution in the remaining areas (*Tongji daxue yeyu jiaoyu chu*, 1984, p.10).

Although like *Renda* Tongji University sends its central staff out to the correspondence education centres, it also employs full-time and part-time teaching and administrative staff in the centres. There were 124 full-time and part-time teachers, and 12 full-time and 45 part-time cadres in the centres in 1984. This, along with 90 full-time and 60 part-time staff in the *Tongji* correspondence education department (in 1988), makes a very large staff for a relatively small student body (Lin & Zhang, 1988, pp.78-81; *Tongji daxue hanshou bu*, 1984b, p.4). They claim a student teacher ratio of 30:1, but, depending on the assumptions made about the amount of work done by part-time teaching staff, it is more likely to be around 20:1 (*Tongji daxue hanshou bu*, 1984, p.4).

With enrolment of a few thousand students each, *Renda* and *Tongji* are both relatively small, but they are several times larger than the average size of around 1,000 (in 1990; see Table 7.2). These two institutions cover several provinces, rather thinly, and the smaller (average) institutions must therefore be very local in their coverage. This has implications for both their teaching material production and their general cost effectiveness, as I will show in the next part of the chapter. First, though, I want to consider other correspondence education institutions.

OTHER CORRESPONDENCE EDUCATION INSTITUTIONS

Institutions sponsored by ministries

My focus in this sub-section is with ministries who directly run correspondence institutions, excluding those in conventional universities directly under the control of the State Education Commission. The two most notable of those sponsored by other ministries are run by the Ministry of Post and Telecommunications and by the Ministry of Coal.⁴⁹ Bruckner (1970, p.178-90) gives an account of the correspondence education

system set up by the coal industry through the mining colleges. By 1964 there were some 4,000 students enrolled in a network based on colleges in five areas including Beijing. It had well developed regulations and a teaching system similar to that in university correspondence education departments.⁵⁰ However, in the post-Cultural Revolution period I have seen no reports of its operation.

The Beijing Correspondence Institute of Post and Telecommunications started life in 1956 as a correspondence education department of the Beijing Institute of Post and Telecommunications. At that time it seemed to deal with secondary technical and vocational level education as well as higher education (*Guan*, 1989, p.603).⁵¹ The statistics for this institute are patchy, but prior to the Cultural Revolution enrolment reached 3,900 and in 1980 it was 3,000 (*Guan*, 1989, p.603; *China Handbook* Editorial Committee, 1983, p.102). In 1966 there were 1,500 higher education graduates, but otherwise no graduation figures are available. The Institute is based upon a network of local post and telecommunications colleges with their own correspondence education departments and these in turn have branch schools and correspondence education centres under them. In 1980 there were some 30 branch schools and 95 correspondence education centres, giving it a more extensive network than for the universities considered earlier (*China Handbook* Editorial Committee, 1983, p.103). The specialisms offered are obviously related to the post and telecommunications industry and are at both degree and diploma level. These specialities are the same as those offered in the full-time conventional colleges, requiring five to five and half years of study for degrees, and three to three and half for diplomas (*Guan*, 1989, p.603). In 1983 continuing education courses were started for engineers and technicians.

Independent Correspondence Education Institutions

These institutions are not attached to existing (national) conventional universities or colleges and are referred to as 'independent correspondence education institutions' (*duli hanshou xueyuan*). However, there is some doubt as to their identity. One source identifies the Beijing Correspondence Institution of Post and Telecommunications as one of these independent institutions (*China Handbook* Editorial Committee, 1983, p.102).

But the 1988 State Education Commission statistical record list these institutions as belonging to Beijing City, and Jilin, Hubei and Sichuan provinces (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.300-1).⁵² The 1988 enrolment in the Beijing City institution is 1,136, much lower than the 1980 enrolment for the Beijing Correspondence Institution of Post and Telecommunications quoted earlier. Hence they are unlikely to be one and the same institution. Although the sponsorship is unknown, they do seem to be independent of national and local government.

The global figures for all independent correspondence education institutions are, however, reported regularly and Table 7.5 gives them for most of the years 1980-1990. This table shows some variation in numbers and a recent decline in admissions common to all correspondence education.

Table 7.5: number of independent correspondence education institutions and student data (thousands) 1980-1990

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1990
No. of										
<i>institutions</i>	4	5	4	3	2	2	7	4	4	4
<i>Admissions</i>	8	1	6	1	0	7	1	5	6	4
<i>Enrolment</i>	15	14	11	8	3	10	32	33	12	16
<i>Graduates</i>	3	0	22	3	2	1	1	1	15 ⁵³	4

Sources: 1980-85 - Department of Planning, SEC (1986, pp.94-7); 1986 & 1987 - *Guan* (1989, pp.754-5, 764-5); 1988 - *Guojia jiaoyu weiyuanhui jihua jianshisi*, (1989, pp.90-1); 1990 - *ZGJYB*, No.991, 19 March 1991, p.2). Note that figures given as zero have been rounded down.

This table indicates that such independent correspondence education institutions are about the same size as *Renda* and *Tongji*, and hence larger than the average size of a university correspondence education department. In 1988 the enrolment for each was (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, p.301):

Beijing City	1,136
Jilin Province	0
Hubei Province	4,891
Sichuan Province ⁵⁴	5,446
Ningxia Huizu Autonomous Region	628

Table 7.5 shows that, not surprisingly given their number, independent correspondence education institutions make quite a small contribution to the total number of students in higher correspondence education.

Non-governmental correspondence education institutions

There are a number of other correspondence education institutions that are not reported in government statistics but which on the face of it offer higher education:

Chinese Logic and Language Correspondence University (*Zhongguo luoji yu yuyan daxue*);

Beijing Humanities Correspondence University (*Beijing renwen hanshou daxue*);⁵⁵

Chinese Rural 'Get Rich' [through] Technology Correspondence University (*Zhongguo nongcun zhifu jishu hanshou daxue*).⁵⁶

People's Daily News Knowledge Development Centre, Correspondence Department (*Renmin Ribao she xinwen zhili kaifa zhongxin hanshou bu*).⁵⁷

These institutions are run by a variety of academic groups, 'commercial' companies and newspapers.⁵⁸ They vary in size with enrolment ranging from 40,000-240,000 and some have extensive regional networks. None of the reports makes clear just what the level of these courses are, but they do not award degree or diploma qualifications, although some offer specifically inservice qualifications. Because of the 'unofficial' nature of these courses they are not really part of higher education, at least in terms of qualifications. However, their size, and the fact that they are national institutions offers some insight into this form (correspondence education) of distance learning. Both the Chinese Logic and Language Correspondence University and the *People's Daily* Correspondence Department have had problems with the distribution to students of so much teaching material.⁵⁹ There were also problems in handling the large numbers of applications. These are important lessons for any distance learning system that wants to operate as a single *national* institution in China.

AN OVERVIEW OF THE PROVISION OF CORRESPONDENCE EDUCATION

Looking back over the data collected in this section on higher correspondence education, it is clear that, even allowing for the fact that some of the institutions considered may not be offering higher education, the conventional universities are still the largest providers. Table 7.6 shows the latest enrolment and graduation figures to show the relative size of the various sectors and institutions. This table clearly shows conventional institutions to be a larger sector than all the others put together.

Table 7.6: latest enrolment and graduation figures (thousands) for all higher correspondence education

<i>Institution or sector</i>	<i>Enrolment</i>	<i>Graduates</i>	<i>Increasing in size?</i>
Conventional			
universities' CE	520	113	increasing
Government run CE	3	n.a.	?
Independent CE	16	4	increasing
Independent CE			
Logic & Lang	176 ⁶⁰	15 ⁶¹	falling?
Humanities	50	80	increasing
Get Rich	80	n.a.	increasing?
RMRB	40	n.a.	?

Sources: Tables 7.2 & 7.5; *RMRB*, 7 February 1988, p.3; *RMRB*, 28 August 1987, p.3.

I have already noted that the government only reports correspondence education in conventional universities and 'independent correspondence education institutions'. This then is the 'official' correspondence education sector, a label reinforced by the fact that only in these two types of institutions does the adult higher education entrance examination apply for entry. The presence of this examination must in turn have implications for the perception of these two sectors by both the public and the institutions themselves. As I will show shortly this is one strand of the argument about quality of provision made by these institutions.

In the next part of the chapter I will consider the promise of correspondence education, by examining the learning offered, access, economic development and cost effectiveness. Given the importance of correspondence education in conventional universities this part of correspondence education will be the main focus.

THE PROMISE OF CORRESPONDENCE EDUCATION

The opening paragraph of the 1987 regulations on correspondence education states that the purpose is three-fold: to exploit the advantages of higher education; to expand its scale; to increase its cost effectiveness.⁶² Each of these is relevant to this section giving an added rationale for the headings derived from Chapter 5, namely learning, access, economic development and cost effectiveness.

Learning

There is considerable discussion of the learning situation, and the materials to support it, in the various regulations and documents from some of the correspondence education institutions and I will draw on these to assess the learning experience.⁶³ It is also worth bearing in mind that in the case of conventional universities there is a long history of successful experience of offering correspondence education. For this reason, and because they represent the biggest sector, I will mainly draw upon documents that they have issued. In the first sub-section I will therefore consider the learning experience as described in these documents, and what is said about the use of media. These documents, which could be seen as mere rhetoric, will then be contrasted with the results of the one study I have of correspondence education. In the second sub-section I will parallel the discussion in Chapter 6 on how the learning combines theory and practice.

The patterns of study and the use of media

The regulations of 1957, 1980 and 1987 all deal with the nature of the study pattern and the elements in correspondence education study. They discuss not only the study pattern in terms of time on various components of learning, but also the integrated nature of these components. Each is specifically discussed and the central role of self-study, based on

and guided by various types of material, is identified along with assignments, face-to-face tutorials, experimental work, and graduate design projects or dissertations.

Similarly universities like *Tongji* and *Renda* issue regulations and documents that bear witness to the careful consideration of the learning situation. Thus the *Renda* 1983 study regulations (*Zhongguo Renmin daxue hanshou xueyuan jiaowuchu*, 1983) discuss each of the components. They identify the needs of self-study, and give advice on reviewing work, taking notes and on using the guidance material. Face-to-face teaching is seen as supporting the student's self-study, helping him or her to grasp the courses' ideas, giving overviews of the courses, and ensuring that an understanding is obtained. Again the student is advised on preparing for, taking part in, and reviewing face-to-face sessions. The discussion of tutoring recognises that it can be done by either face-to-face or written means. One great strength, not for example recognised by the RTVU, is the role of assignments. They are not just assessment devices, but also a means of consolidating learning, giving the student a chance to practise analysing and solving problems and an opportunity for feedback from a teacher.⁶⁴ *Tongji* has material to be used by new students in a preparatory week that similarly discusses the various components, although in a slightly more legalistic way (*Tongji daxue hanshou jiaoyu chu*, 1983).⁶⁵

The regulations from the State Education Commission and universities lay great stress on protecting students' study situation, by insisting upon time being allowed by employers. As I noted in Chapter 4 there has long been a problem of releasing workers from production to study part-time or even spare-time, and in the 1957 regulations employers were required to give release and to protect evenings for study time. The 1987 regulations are less specific and simply require employing units to "actively encourage and support students' studies and help them resolve practical difficulties." As I have already said they are also required to provide financial support for face-to-face sessions at the university. *Tongji* goes as far as signing a contract with employers to protect students, by creating favourable conditions including a day off and free evenings for study, and paid leave to attend the university for concentrated face-to-face tuition.⁶⁶

The regulations and documents place great stress on producing appropriate materials for students' study conditions. In the 1987 regulations one of the criteria for assessing teaching staff is quality of editing and writing of materials. *Tongji* gives characteristics of good material that focuses upon the needs of self-study (*Tongji daxue yeyu jiaoyu chu*, 1984, p.7). The university has tried to compile material to support student self-study, although materials are mostly adapted from that used in the full-time system, supplemented by specifically designed material. When they specifically write material for correspondence education they try to integrate theory and practice, spend plenty of space on clear explanations and supplement points to help self-study, as well as giving study guidance and exercises and examples for each chapter (*Tongji daxue hanshou bu*, 1984, p.3). Despite this clear rationale for the printed materials it is evident that all is not well. Both Zhou (1990, p.9) and Qian *et al* & Haughey *et al* (1988, p.376) indicate the need for research work on the construction of suitable material for correspondence education, including the use of audio-visual material.

For the most part correspondence education within conventional universities uses only print and face-to-face teaching. However, the *Tongji* Vice-President, Jiang Jingbo, in a speech at the 1983 correspondence education students' graduation ceremony, noted that although things were improving quickly they needed to develop television education. The Beijing Post and Telecommunications Correspondence Education Branch College started using video methods for parts of courses in 1983 (*Guan*, 1989, p.603). A number of the other correspondence education institutions I have discussed are using audio material either in the form of audio-tapes or radio broadcasts.

In the only empirical study of correspondence education I have managed to locate, Haughey *et al* (1991) developed more appropriate distance learning material including video to try and break the dependence of correspondence education on face-to-face teaching. It was evident from this study that few aids to learning existed in the teaching material and there was little use of video. This research showed that it was possible for students who had viewed video, even under adverse conditions, to perform as well on examinations as those who had substantial face-to-face instruction in addition to

correspondence material. This study illustrates that, despite the strong rhetoric in the documents, both the quality of the design of the materials and the development of the use of media are poor.

Combining theory and practice

Like the students in RTVU those in correspondence education are mainly working adults, and thus have many of the same advantages in terms of the potential to combine theory and practice. In discussing student performance on the graduation design project *Tongji* staff note that correspondence education students are very strong on practical work capability (*Tongji daxue yeyu jiaoyu chu*, 1984, p.9). This is also recognised in the fact that if students' jobs match the speciality being studied they do not need any 'field work', which in the case of a full-time science and engineering student would mean working in factories. The fact that correspondence education students continue to work while studying allows them to use what they learn (*Tongji daxue hanshou bu*, 1984b, p.7). The phrase 'study what you do' (*zuo shenma xue shenma*) is one that has been used since the 1957 regulations were published, and is the reason for the continuing concern that employing units will ensure students study a speciality related to their job. However, the evidence of success that I will present in the next sub-section indicates that graduates who are successful had no work experience prior to starting to study, throwing some of this rationale into doubt. One explanation is that the courses do not actually make use of this practical experience, nor indeed assess it. Given the constant stress on the equivalence of teaching plans and examinations etc. with conventional full-time programmes, it would not be surprising if this were so. When analysing problems to be investigated, one *Tongji* article said that a weakness of correspondence education students in the graduation design project was the fact that, though their practical capability was good, their basic theory was not as good as that of full-time students. This showed up in their answers in the oral 'defence' of their work, where they did not exhibit broad enough thinking (*Tongji daxue yeyu jiaoyu chu*, 1984, p.9).

The linking of correspondence education to the full-time university curriculum limits the flexibility that there might otherwise be if an attempt was made to link study to the

practical situations of students.⁶⁷ This is less flexible than the RTVU situation where a proportion of courses can be related directly to the student's work situation. The limitation is not only in the detailed content of a degree programme, but also in the kinds of degrees that can be offered. There is a worry among correspondence education departments about the amount of practical work that can be carried out, and it is for this reason that strict conditions are placed on students about attending the university to complete it. As was the case in teacher training, the State Education Commission limits the range of specialities that can be offered because of the difficulty of doing practical work.⁶⁸ The 1988 regulations on the decentralization of the authority of approval of specialities will change the situation and allow the flexibility that has been lacking so far. The objective of these regulations, that allow PECs to approve submissions from universities for new specialities, is to harness local enthusiasm so as to suit local needs for social and economic development (*Zhongguo jiaoyu nianjian bianjibu* (1990, p.249)).⁶⁹ Although some 160 universities have had approval for local courses there is no published information on these specialities.

The *Tongji* regulations, on the graduation design project, state that its objectives are helping in combining theory and practice, and also in the development of the ability to work independently something that will be useful in the long term (*Tongji daxue hanshou bu*, 1984, p.32). Some students can actually be exempted from the project, as was the case with nineteen of the 108 graduates in 1983 (that I considered earlier) who already had independent design capability.

As I have said the lack of empirical data on the actual ability of students, as rated by employers, makes it difficult to say whether or not the potential of the correspondence education students is realized. However, there is some data on the success of graduates that I will consider in the next sub-section.

Measures of success

As with the RTVU course pass-rates and graduation rates are some indication of the success of learning. Both *Renda* and *Tongji* show high course pass-rates of 90-95%, but

slightly lower graduation rates. Table 7.3 shows that, even although admissions exceeded 2000, the annual number of graduates of *Renda* never exceeded 1000 in the 1980s, indicating either very slow through-put or large dropout.

The survey of the 1983 *Tongji* graduates showed that of the 156 who were admitted in 1978, 35 went into full-time education and three joined from the 1979 and 1980 intakes giving a total of 124 who continued (*Tongji daxue yeyu jiaoyu chu*, 1984, pp.6-15). Of these two left to study abroad before graduation, six dropped out for reasons connected with work, eight failed at least one course examination and 108 passed all elements of the degree. This gives an overall pass rate of 87% of the 124, close to the 90% pass rate for individual course examinations. Under national regulations only the best of the graduates actually get a Bachelor's degree award (*shouyu xueshi xuwei*), and of the 108 sixty-four got this (59.2%). These are remarkably high rates of success, though admittedly for a small sample of students, but if replicated nation-wide it would be an effective system for adult higher education. The factors that were related to success are in some cases surprising:

- a although those who graduated from secondary school in the peak years of the Cultural Revolution disruption (1966-68) were less successful, those who graduated before 1966 did worse;
- b those who were workers (rather than, say, technicians) did not do so well, but neither did administrative cadres;
- c the more work experience students had the lower was their rate of graduation.

A 1982 survey of graduates of 1962-66 provides information on how they have been promoted since graduation (*Tongji daxue hanshou bu*, 1984b, p.3; *Tongji daxue hanshou bu*, 1984a, p.2). Of the 240 surveyed:

- 5.7% were promoted to senior engineer;
- 78.2% were confirmed as engineers;
- 16.1% were promoted to assistant engineer.

Without details of the survey and what the graduates did before study it is difficult to infer much, except that they were all promoted and are in jobs that recognize graduate status.⁷⁰ There are also many anecdotes of successful graduates, and these are accompanied by reassurances that employers are very satisfied with correspondence education graduates.

They are apparently happy with students' ability to relate what they have learnt to their work, their ability to work independently, and their organizational capability (*Tongji daxue yeyu jiaoyu chu*, 1984, p.2).

The comments on the quality of correspondence education provided by *Tongji* in the documents I have used focus on the difficulties of the study situation. But these difficulties have not been the subject of published reports of research, though they may be in later editions of the kinds of documents I have quoted from.⁷¹ The overall picture for the learning offered by correspondence education is that it is strong on rhetoric but rather weaker on either the quality of the learning material or the use of media. Nevertheless if the studies considered above are indicative of the general situation, then correspondence education is successful. It is of course possible that this is explained by the quality of the intake, indicated by the low success rates of students taking the entrance examination. I will return to this issue of quality in the final part of the chapter.

Access

Satisfying demand

As with the RTVU demand for higher education comes from school leavers and adults. Tables 4.11 and 6.3 have already shown that most school leavers who enter adult education are admitted to the RTVU, and that in any case the total number is very small compared to the number who fail to get into conventional higher education. Table 7.7 (overleaf) shows the numbers and proportions admitted, indicating that correspondence education's school-leaver intake has increased. But even given the spectacular percentage growth there is unlikely to be much of a contribution to absorbing more of them.⁷²

The picture is different when the role of correspondence education in admitting adults is considered. In Table 7.8 (overleaf) the students in correspondence education provided by universities and government-run independent institutions are combined and the proportions in each sector of adult education calculated (1989 figure is an estimate).⁷³

Table 7.7: numbers of school leavers (thousands) admitted by RTVU and correspondence education in conventional universities in selected years

<i>Year</i>	1985	1987	1988	1990
<i>Total No. of school leavers</i>	37.8	39.6	54	28
<i>RTVU intake⁷⁴</i>				
<i>No.</i>	31.7	33	38	n.a.
<i>%</i>	84	84	70	n.a.
<i>CE intake</i>				
<i>No.</i>	(5) ⁷⁵	5.8	14	n.a.
<i>%</i>	13	15	26	n.a.

Sources: Total school leavers Table 4.13. 1985 *PRC Yearbook* Editorial Department (1987, p.458). Correspondence education: 1987 *Guan* (1989, pp.764-5); 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.90-1); 1990 *ZGJYB*, No.991, 19 March 1991, p.2.

Table 7.8: a comparison of the numbers (thousands) entering adult education and correspondence education 1980-90

<i>Year</i>	<i>AE admissions</i>	<i>CE admissions</i>	
		<i>(No.)</i>	<i>(%)</i>
1980	204	62	30
1981	95	45	47
1982	274	35	13
1983	417	68	16
1984	474	93	20
1985	788	179	23
1986	564	113	20
1987	515	133	26
1988	698	195	28
1989	450	n.a.	(30)
1990	492	153	31

Sources: adult education Table 4.1; correspondence education Tables 7.2 & 7.5. Percentages based on original unrounded figures.

Table 7.8 shows that correspondence education as a whole is taking a large share of adult education admissions. Given my earlier conclusion about the size of the various parts of correspondence education, any potential to increase the intake of either school leavers or adults depends upon the potential growth within conventional universities. The targets of a third of all students being correspondence education students has already been met, though *Renda* is supposed to have reached 55%.⁷⁶ If all universities could reach that figure then another 100,000 students could be admitted each year, based on the 1990 figures. But with three-quarters of a million who sit the adult higher education entrance examination not being admitted there is still some way to go to satisfy demand. In any case admissions have dropped in recent years. Government does not bear all the costs of study, but any expansion would require the administering authority (State or Provincial Education Commission) to bear the cost of staff. For employing units there is the cost of tuition, time off for students and travelling expenses. Both of these act as inhibitors in satisfying demand for higher education.

An alternative strategy might be to use national institutions such as the Logic and Language Correspondence University, with funding and fees being borne by non-government agencies and students. The figures for enrolment given in Table 7.6 show that large numbers can be absorbed, with the four institutions considered there having a combined enrolment of almost 350,000. But two problems exist. Firstly, there is the sheer logistics of running such large centralized organizations, given the problems that both the Logic and Language Correspondence University and the People's Daily Correspondence Department experienced. Secondly, some mechanism to ensure quality would be needed. The worries about money-making concerns, and about the control of the curriculum would act as deterrents for the government, and indeed perhaps for those who would seek to set up such institutions. Having to operate under the kinds of regulations that govern university correspondence education departments may make it impossible to sustain an institution that cannot afford to set up its own academic staff.

Table 7.8 shows an undoubted rise in correspondence education in what might be called the 'government approved' sector, both in absolute numbers and as a percentage of all adult education. The recent decline in adult higher education in general, documented in

Chapter 4, also appears to have affected correspondence education.⁷⁷ Employers as well as the government are more concerned with inservice and continuing education and see degree and diploma qualifications as insufficiently specific (a problem already noted in my discussion of the learning experience). This coupled with the fact that employers are under pressure to promote graduates (as was the case for the RTVU) may have a feedback affect on both potential students and employers.⁷⁸ All these factors lead to the conclusion that, although correspondence education has made a considerable and growing contribution to satisfying demand, it is *policy* rather than *capacity* that prevents further expansion satisfying the excess demand for higher education, as was also the case with the RTVU.⁷⁹

Openness

As with the RTVU I will consider open entry and open learning as the two elements of openness. Correspondence education in the 'official sector' is much like the RTVU on the first of the two, because it too has an entrance examination and secondary school graduation requirements. It is also faced with the same contradictions of openness v planning and openness v quality. Less is said about the problem of planning, except that recruitment has to be according to the national higher education plan, and that correspondence education as a whole must be planned in a co-ordinated way across the various ministries of the State Council and the provinces, municipalities and autonomous regions.⁸⁰ What is much more of a contradiction is the conflict of quality and openness. One of the strengths of correspondence education in universities is based on quality assurance of the selectivity of the entrants. In this case it is not in the interests of university correspondence education departments to be seen to be open because of the threat to their quality.

But the lack of open entry has other dimensions related to the protection of quality. The fact that strict conditions are put on employers, and the requirements for time off for periods of full-time study, both act as deterrents. Students are effectively studying part-time, and there appears little chance of a spare-time model being employed.⁸¹

On the elements of open learning, namely *structure* and *dialogue*, correspondence education does a little better than the RTVU. Correspondence education is high on *structure* in that there is no choice over study; there is a rigid study order and submission of assignments, and no course choice.⁸² There is not even the possibility of courses for local use, that characterised the RTVU, although there will be specialities defined at the provincial level. On the criterion of *dialogue*, however, correspondence education does rather better. The role of assignments as part of learning, and the fact that in many cases central staff mark them and enter into a dialogue with students, makes it stronger than is the case with the RTVU. Added to this is the fact that central teachers have a responsibility to answer students' problems on an individual basis. What is difficult to gauge is the students' views about this and whether the remoteness of students, and perhaps their isolation, makes dialogue rather weak. Institutions that attempt to cover a number of provinces are likely to be at a disadvantage in this regard, especially those, like Hangzhou University, who have few correspondence education centres or branch schools in other provinces.

Like the RTVU, correspondence education cannot be seen as an open learning system on either of the two major aspects of entry and learning, although it does have some advantages in the *dialogue* dimension of learning.

Access for disadvantaged groups

The three overlapping groups identified in Chapter 6 were those in rural areas, those in remote areas and minority groups. For each of these we can ask whether there is anything specific offered for them, and whether they have access to whatever is provided.

There is great potential for correspondence education to serve rural areas, and in the pre-Cultural Revolution period an emphasis on it was emerging. In the period before the Cultural Revolution a number of agriculture universities and institutes ran correspondence higher education as part of the university correspondence education provision discussed earlier. In 1966 there were some 17 agricultural universities and three forestry

universities that provided correspondence education (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.611).⁸³

In the post-Cultural Revolution period the picture is much less clear. There is, as I have already shown in Chapter 5, an Agriculture Radio and Television Network that had its origins in correspondence education, but this is not at higher education level. There are also a variety of other correspondence institutions that serve rural areas, although they are not offering higher education.⁸⁴ The lack of any higher education provision of correspondence education was lamented by two readers' letters in the People's Daily in 1980, where they called for correspondence universities to serve rural areas. In 1983 a reader was still complaining about the lack of an agriculture correspondence university.⁸⁵ However, some of the sixty or so conventional agricultural universities could have offered correspondence education in that period, although the total number that actually did has not been reported.⁸⁶ Apart from the 'Get Rich' University described earlier, there is one other institution, the Agriculture Correspondence University established by the Chinese Science Association (*Zhongguo kexiehui*), described as a 'peasant university without walls'. But, despite the large numbers of students (100,000) there is no evidence that it in fact offers higher education.⁸⁷

In 1990 there were only five adult education agricultural universities in the country with a total enrolment of 400, all full-time students, and there is little chance of them making any specific input to correspondence education.⁸⁸ So the picture is not a promising one in terms of *what* is offered. It is unlikely to be any better for minority groups, who will not be able to get any courses specifically for them and certainly not in their own language.

Assuming that rural people want to study what is on offer can they take part in the study programme? Any system based on mail should in theory work anywhere in China, but some of the turn-round times for feedback to students may not be adequate in rural areas. Universities like *Tongji* put strict limits on how long tutors have to reply to students: three days for a query, and a week for an assignment (*Tongji daxue hanshou bu*, 1984b, p.6). If these are adhered to then a fairly regular feedback system can be set up. As I noted in Chapter 5 those in remote areas will not be able to rely upon the postal system.

Just as important is access to a correspondence education centre and to local tuition. None of the conventional institutions offering correspondence education seems to have sufficient centres to operate outside even the large cities, let alone in rural areas. The position will be even worse for remote areas. This is rather ironic given that most universities operate relatively locally, and so in theory are better placed than a national institution. For those universities that send staff out to centres it would not be feasible to serve rural areas without a considerable amount of time being wasted on travelling, assuming the areas had a centre.

The general difficulties for conventional universities in serving rural and remote areas is borne out in the admittedly scanty statistics provided by the study of the 1983 graduates in *Tongji*, where only one of the original 124 came from outside of Shanghai. While they claim that things are better now it is unlikely that rural areas will benefit very much. That rural areas can be reached cannot be doubted, if the evidence from the 'Get Rich' Correspondence University is anything to go by. The fact that the 'official' correspondence education system does not reach rural areas may be more to do with *what* is on offer, and its relationship to entry requirements, than *how* it is offered.

Economic development

It is possible to consider how correspondence education has responded to government policy over a longer period of time than for the RTVU. At the time of liberation it was seen as part of the development of those in jobs to be able to take part in the creation of new China. Thus there was the development of economic management in institutions like *Renda*.⁸⁹ In the 1950s the development of correspondence education was part of the first two five-year plans. As I have shown policy in the early 1960s reflected the needs of the economy, and correspondence education grew to match these needs. In the periods of the Great Leap Forward and the Cultural Revolution correspondence education did not flourish, rather it was conventional institutions such as part-work, part-study and spare-time (face-to-face) institutions that were seen as better reflecting the view of development in these periods. After the Cultural Revolution correspondence education again grew in response to the kinds of economic policies that had existed in the 1950s and 1960s.

These developments show a correspondence education system responding in periods when policies for economic development were emphasised, and this response has continued in the post-Mao period. Table 4.8 has already shown how correspondence education has recently taken over from the RTVU as the main provider of adult graduates. This role is likely to continue into the 1990s as the increased admissions of the late 1980s work their way through the system. It shows the increased importance of correspondence education's contribution to the total graduate needs for economic development. However, in more recent years since the introduction of the 'Professional certificate' (*zhuan ye zhengshu*) in 1988 there is no evidence that correspondence education departments in conventional universities are attempting to respond to this new policy, except in the field of teacher education.⁹⁰ The independent correspondence institutions have some continuing education and inservice provision but they represent a small proportion of total provision.

Table 4.9 has already shown that, although the proportion of diploma graduates has improved, correspondence education has the lowest proportion of them (79% compared to 91-100%). Nevertheless it contributes about 20% of all the adult education diploma graduates, and 10% of all conventional and adult diploma graduates (Tables 4.9 & 4.10).⁹¹

Table 7.9 (overleaf) shows that of the areas needed correspondence education is contributing to 'finance and economics' as strongly as adult education in general (which is in turn better than conventional education). It is not doing so well in 'government and law', another area of need. Conversely it makes a small contribution to 'engineering' and to a lesser extent 'medicine', areas where reductions (in relative terms) are necessary.⁹²

Table 7.9: proportion of correspondence education graduates compared to total adult higher education and conventional higher education, by field of study

<i>Field of study</i>	<i>CE No.</i>	<i>CE %</i>	<i>Total AE</i>		<i>CHE %</i>
			<i>No.</i>	<i>%</i>	
Engineering	11,480	8	88,741	12	31
Agriculture	5,509	4	6,997	1	5
Forestry	1,354	1	2,049	0.3	1
Medicine	3,361	3	11,366	1.5	7
Teacher training	63,058	42	193,603	26	32
Literature	21,596	14	182,576	24	6
Science	1,883	1	6,118	1	5
Finance & Economics	33,438	22	172,167	23	9
Government & Law	6,207	4	85,825	11	2
Physical Education	1,745	1	2,371	0.3	1
Art	47	0	2,031	0.3	0.7

Sources: correspondence education *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.32-3); adult higher education (AE) and conventional higher education (CHE) Table 4.11.

Although correspondence education can respond in general terms to the needs of the economy (in quantitative and qualitative terms), it has not been able in the past to respond to local needs of particular factories. This is a strength of the RTVU. The contract with employers does at least mean that there is a match of what is on offer with the job of students. Correspondence education provided by universities has been dependent upon what the full-time sector offered and this limits its response to needs.⁹³ There is some irony in this, as I have already noted, when an apparently national organization like the RTVU can be more responsive to local needs, than the more local universities. The source of this irony lies in the decentralized structure of the RTVU, compared to that of correspondence education in universities. This makes the decentralization of speciality approval in the 1988 regulations all the more significant in allowing correspondence education departments in universities to respond to local needs. The other kinds of correspondence education offered nationally, that I considered earlier, seem to be even

more centralized, and thus even less responsive. Only time will tell whether or not correspondence education as a whole will be able to move away from the general qualification orientation in the way that RTVU is being forced to.

Cost effectiveness

Costs

The cost effectiveness of correspondence education is not often enunciated in regulations and policy documents. Zhou (1990, p.9) sees it as an issue, and there are a number of instances when costs are compared with conventional universities. For example, in giving the advantages of correspondence education it is argued in *Tongji* that investment is minimized, being 12% that of the full-time student (*Tongji daxue hanshou bu*, 1984a, p.4). The only figures I have found for comparative costs are: RMB 200 yuan per year for correspondence education in *Tongji*, and RMB 2,200 yuan for conventional higher education; several hundred yuan for a diploma for a teacher training correspondence education compared to RMB 2-3000 yuan for full-time study.⁹⁴ As with the RTVU there are no details of the basis of such cost comparisons, and it is therefore difficult to make any absolute judgement about them. If they are the same as that of the RTVU, then correspondence education in universities is cheaper. This is especially so if it is assumed that RTVU students are studying full-time, whereas those in correspondence education are not.

As with the RTVU I will consider in this section the threat to fixed and variable costs that correspondence education will face as it develops.

Fixed costs

Correspondence education in conventional universities benefits greatly from using the existing buildings and facilities for experimental work and face-to-face tuition. These are used when full-time students are on holiday, and hence not only provide a cost-effective way of offering correspondence education, but also improve the cost effectiveness of the conventional sector. The establishment of a better network of correspondence education

centres, especially for rural areas, may of course pose a threat to the cost-effective use of buildings. If existing buildings and facilities are used this presents no problem, but it is evident that some think purpose-built facilities are necessary. In the case of teacher training these include the building of blocks for experimental facilities and for accommodation.⁹⁵

The development of the use of new audio-visual media could be a threat to cost effectiveness, again if new facilities are to be established. Television will be particularly expensive, but it is likely that if this occurs more use will be made of local facilities such as the Audio-visual Centres run by the provincial education commission. (I will deal with these centres in Chapter 9.)

The third element of the fixed costs is that of staff, and here the full-time staff are crucial. These staff are increasing,⁹⁶ as noted earlier, and the staff:student ratios are poor compared to the RTVU, primarily because of the centralized way they organize teaching. Zhou (1986, p.24) argues that a ratio of 1:25-40 is required, though he does not clarify the role of correspondence education centre staff in this ratio.⁹⁷ So if Zhou's recommendations are followed there will be a threat to the cost effectiveness of correspondence education.⁹⁸ Global figures for university correspondence education show a dramatic decline in the student:staff ratios in the early 1980s, and they are even worse in the independent correspondence education institutions, and the decline is continuing (see Table 7.10 overleaf). This indicates that there has been a reduction in the cost effectiveness of correspondence education, although this has not continued in the case of correspondence education in conventional universities. The only defence against this threat is to make more use of part-time staff.

Table 7.10: number of students per member of staff for correspondence education in selected years 1980-1990

<i>Year</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1987</i>	<i>1988</i>	<i>1990</i>
<i>University CE</i>							
<i>All staff</i>	244	146	106	n.a.	n.a.	77	n.a.
<i>Teachers only</i>	432	259	191	n.a.	n.a.	211	n.a.
<i>Independent CE</i>							
<i>All staff</i>	91	89	30	17	71	27	20
<i>Teachers only</i>	149	144	52	29	191	55	31

Sources: 1980-83 *Zhonghua renmin gonghe guo jiaoyu bu jihua caiwusi* (1984, pp.244-5); 1987 *Guan* (1989, p.764-5); 1988 *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.32-3, 91-2); 1990 *ZGJYB*, No.991, 19 March 1991, p.2.

A fourth element of fixed costs is the teaching material sent to students (there is of course also a variable cost element associated with this). The benefit of spreading development costs for material over a large number of students is, in the case of correspondence education in universities, not realized. Even the large correspondence education departments with 8,000 students, and 15 specialities, will have relatively low numbers per speciality.⁹⁹ Although there is evidence of some attempt to centralize the development of material in certain areas, the duplication of effort nation-wide seems like a scandalous waste of resources.¹⁰⁰

Variable costs

The only direct costs that are under threat are those that may come when the teaching media are extended. If video-tapes are used as a means of distribution, as was the case in the experiment reported by Haughey *et al* (1991) and as is the case in the RTVU, then variable costs will rise along with associated fixed costs of equipment. At this stage it is too early to comment on this, and no details are available about what the correspondence education institutions who already use television do. It may be that a local solution may be found through the local broadcasting stations, and again Chapter 9 will consider this.

Indirect variable costs are affected by the large amount of concentrated face-to-face that is required (30%) with the resulting loss of production for the employer. However, any attempt to reduce these by providing local facilities may simply increase the fixed costs, as well as reducing the cost effectiveness of the conventional sector. A compromise would be to focus on those elements that were essential, for example experimental work, and reduce the amount of time on other face-to-face activities. The trend, however, has been to increase this time from 25% to 30%.¹⁰¹

Who gains?

The costs of correspondence education have been redistributed since 1980, such that fixed costs of correspondence education centres will be borne by whoever sets them up, employers or local educational administrations. But this may reduce the indirect variable costs of loss of production by having students away for long periods of time. Students will benefit by local face-to-face, not in financial terms but in social terms; their family life will be disrupted less. In general terms correspondence education may be seen to be attractive financially for students. For example, teachers prefer correspondence education to full-time education because their salary, which is geared to number of years of service, is not affected when studying by correspondence, whereas it is when they are away on a full-time diploma.¹⁰²

THE DEVELOPMENT AND ROLE OF CORRESPONDENCE EDUCATION

Quality is an issue that is constantly discussed in writings on correspondence education, especially as it relates to that provided by universities.¹⁰³ Because of this I will start by considering quality and then go on to look at the effect it has on the development and role of correspondence education. The stress on quality is understandable given the worries about 'bogus' correspondence education institutions that are reported in the press, and that seem to be a front for profiteering at students' expense.¹⁰⁴ Not surprisingly conventional university provision is the standard that is used to measure quality.¹⁰⁵ Comparisons are made over teaching plans, including total length of study, the nature of courses, elements such as experiments and graduate design projects or dissertations. The desire is to show

that there is direct equivalence, or even to show that in terms of study hours correspondence education students do twice as much as full-time ones. The comparison also extends to correspondence education department staff, who are expected to match conventional staff in terms of academic levels and research.¹⁰⁶

The need to protect the reputation of correspondence education means that teaching and learning issues are also an element of quality, at least at the level of rhetoric. This rhetoric is expressed in terms of a concern for the quality of materials, for the interaction of teachers and students and for the students' study conditions. I have already shown how this concern is not evidently translated into action, although the evidence is not substantial. Further the need to ensure quality through an equivalence with full-time education has meant stressing concentrated face-to-face attendance at the university or at a correspondence education centre, to the extent that this element has increased in recent regulations.

All these elements of quality have had an effect on the development of correspondence education. Although correspondence education now occupies the position as the main provider of diploma and degree qualifications, it does so in the face of a number of conflicting signs, some of which have the above idea of quality at their root.

Firstly, as a distance learning *system* it has little coherence, despite the existence of central regulation. It resembles a combination of both the 'switchboard' model (a facilitating centre for distance learning projects with control exercised by other educational and public bodies), and the 'dispersed centre' model (an autonomous institution which co-operates with a wide variety of institutions) from Chapter 5 (see Table 5.1 and Figure 5.4). The 'switchboard' centre is the State Education Commission controlling through regulations, but without an 'operator' to monitor, control and encourage interaction. The 'dispersed centre' is located at each of the university correspondence education departments, who co-operate (at least in theory) with local authorities and industry. The lack of a strong central body means that there is little evidence of exchange among the departments, or benefits of economies of scale by sharing teaching material. This model may not apply to the independent correspondence education institutions, but they are

individually small and together represent a small proportion of the total correspondence education provision.

Secondly the concern for quality that uses conventional universities as a benchmark has a negative effect on the development of distance learning methods within correspondence education. Thus the increase in full-time staff (Table 7.10) threatens cost effectiveness, and the lack of development of the use of media compares poorly with the RTVU (and indeed the Television Teachers' College) and perhaps reflects a general lack of development of teaching material which is only recently showing signs of change (Haughey *et al*, 1991). This lack of development may be compounded by the emphasis on face-to-face teaching, which not only undermines the idea of distance learning, but also reduces access to correspondence education by, for example, rural people.

Thirdly, in terms of making up for deficiencies of the conventional higher education system in responding to the needs of the economy, correspondence education seems less effective than the RTVU. I have indicated that the specialisms studied are only partially correcting the imbalance of conventional higher education, and that there is a larger proportion of degree-level (as opposed to diploma-level) graduates than in the RTVU (Table 4.9). Despite this there is anecdotal evidence that these graduates are more practical than their conventional counterparts. More significantly perhaps, correspondence education does not appear to have yet responded to the government and employer demand for inservice and continuing education. Nor has the dispersed nature of the system resulted in correspondence education being more responsive to local economic needs, which is ironic when compared to the more centralized system of the RTVU. Thus correspondence education has neither the advantages of a more centralized system (e.g. cost effectiveness) nor the responsiveness to local economic development of a more decentralized system. But the 1988 regulations on the decentralization will change this at the level of specialisms. They will not, however, allow employers to add courses as in the RTVU. As I will show in Chapter 9 correspondence education may be more responsive to local structures in the area of teacher training.

Given the seeming lack of fulfilment of the promise of correspondence education as a distance learning system (in terms of learning, access for disadvantaged groups, economic development and cost effectiveness), it is difficult to see why correspondence education has become the largest system. It is making an important contribution to satisfying demand for higher education, but even here government policy is affecting its ability to do this. Were it just that the government saw correspondence education provided by conventional universities as the best guarantee of quality of adult higher education (for degrees and diplomas), then that might explain its expansion in proportional terms, but not its decline in absolute terms. Rather it may be more to do with the lack of control by either local or central government over the development of university correspondence education departments. This lack of control appears to be a significant factor in the self-study examination system that I turn to next.

NOTES

1. Professor Zhou Jianshu (former Vice-President of the People's University Correspondence Institute) said that the International Correspondence School of the USA operated in China in the early part of the century.
2. Bruckner (1970) gives a comprehensive treatment of spare-time higher education focusing on correspondence education from 1936-1966. Chambers (1980, Chapter 8) deals briefly with the Cultural Revolution period, and Chambers (1984, pp.197-9) briefly with the post-Cultural Revolution period, both in the context of adult education in general. Zhou Jianshu, the former Vice-President of the People's University Correspondence Education Institute, has written in English about it though mainly focusing upon his own institution (Zhou, 1984, 1985, 1986, 1987, 1988c). He has also written a book (in Chinese) on higher correspondence education worldwide, with a short chapter on China (Zhou, 1988b). Lin & Zhang (1988) give a recent account (in English) in the context of university adult provision. The most definitive account comes from a Chinese language source, the *Chinese Education Yearbook, 1949-1981* (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.605-13), but this deals only with correspondence education in conventional universities. Guan (1989, pp.308-44 & 601-8) includes some important official documents (in Chinese) of the 1980s and discusses its development and forms. There is a complete history of correspondence education in book form: *30 Years of Higher Correspondence Education* (*Gaodeng hanshou jiaoyu sanshi nian*) edited by the State Education Commission Higher Education Third Office, and published by Northeast China Teachers' University Publishing House (reported in *ZGJYB*, No.535, 23 April, 1988, p.2). However, I have been unable to get hold of this volume.
3. The history of correspondence education in the pre-Cultural Revolution period, and 1980-81, is taken from the *Zhongguo jiaoyu nianjian bianjibu* (1984, p.605); from 1981 to date references are given in the text.
4. Chambers argues that these latter courses became a tool of the 'Gang of Four' in mobilizing the young people to their cause. An example of this from Shanghai, a power base of the Gang of Four, is illustrated in *Chinese Education*, Vol.9, No.4, 1976-7 (whole issue). Despite the fact that technical subjects were taught the focus was on the political education of the young people.

5. Bruckner (1970, p.81) says that Kirin Teacher Training University and the Northeast Teachers' Training University also started correspondence education in 1953.
6. This notification is reproduced in full in the *Chinese Education Yearbook, 1949-1981 (Zhongguo jiaoyu nianjian bianjibu, 1984, p.897-8)*.
7. Although a summary of the meeting was published, the advent of the Cultural Revolution disrupted the implementation of any of the recommendations (reproduced in *Zhongguo jiaoyu nianjian bianjibu, 1984, pp.898-900*).
8. A target that was almost met in 1985, and had been by 1990. The numbers enrolled in conventional and correspondence higher education in 1985 and 1990 are given in Table 7.11.

Table 7.11: comparison of enrolments in conventional higher education and university correspondence education and evening universities

<i>Year</i>	<i>Conventional HE Enrolment</i>	<i>CE & EU Enrolment</i>	<i>%</i>
1985	1,703,000	492,976	29
1990	2,063,000	693,200	34

Sources: 1985, (Department of Planning, SEC, 1986, pp.20 & 95); 1990, (ZGJYB, No.991, 19 March 1991, p.2)

9. This is reproduced in an undated Tongji University Correspondence Department document of teaching plans: Tongji daxue hanshou bu (undated) *Tongji daxue hanshou, yedaxue jiaoxue jihua*, Shanghai, Tongji daxue. It is also discussed in *China Education yearbook, 1949-1981*, as is the associated conference that spawned it (*Zhongguo jiaoyu nianjian bianjibu, 1984, p.607-8 & 613*).
10. *State Council Bulletin*, No.3 (398), 31 March 1983, pp.100-2.
11. *State Council Bulletin*, No.4 (527), 1 March 1987, p.160-5. Zhou (1987 & 1988c), writing in English has given some of the outcomes of the conference which have been incorporated in the regulations.
12. This was modified in the 1988 regulations for specialisms approved at a local level.
13. In describing the importance of this face-to-face contact (which he says was 25%) Zhou (1984, p.355) notes that, although it is not now obligatory for students to attend it, 70% do so because of the motivation being offered by the recognition of equivalence with conventional full-time study.
14. The *Chinese Education Yearbook, 1949-1981 (Zhongguo Jiaoyu Nianjian bianjibu, 1984)*, a government publication, only deals with correspondence education in universities and colleges, and government statistics quote only these, and 'independent correspondence education institutions', of which there are currently only four (ZGJYB, No.991, 19 March 1991).
15. This figure includes those with 'Evening Universities' as well.
16. The *China Education Yearbook, 1949-1981 (Zhongguo Jiaoyu Nianjian bianjibu, 1984, p.606)* gives an enrolment of 177,000 students, but I have taken the State Education Commission, Department of Planning's later figure.
17. Source: *Guan (1989, p.602)*.
18. Lin & Zhang (1988). Zhou (1986, p.23) gives a figure of 400 institutions, but his associated figure for student enrolment (310,000) does not match the State Education Commission figure (364,552).
19. Qian *et al* & Haughey *et al* (1988, p.375) and Zhou (1988c, p.450) give a figure of 311 institutions.
20. Mr. Wang Yuanlin, Director, Teacher Education Department, State Education Commission, made this point (interview 19 May 1990).

21. The February 1987 regulations discussed earlier give the teacher training universities this task, but also other universities that have the conditions (*State Council Bulletin*, No.4 (527), 1 March 1987, p.161).
22. *ZGJYB*, No.1005, 13 April, 1991, p.3.
23. *ZGJYB*, No.406, 20 June 1987, p.2.
24. South China Teacher Training University uses a variety of county-level teacher training schools to support its correspondence education programme; in 1980 it used 14 of the 34 such schools for 500 primary and 800 secondary school teachers (*NFRB*, 26 July 1989, p.2).
25. These points on rural schools were given by Mr. Wang Yuanlin, Director Teacher Training Department, State Education Commission (interview 19 May, 1990).
26. Reports of these institutions are usually carried in local rather than national publications, especially newspapers. In the years 1979-1988 only four reports in *GMRB* and *RMRB* were for teacher training correspondence education, and they all concerned these large national level institutions (*RMRB*: 18 May 1978, p.3; 26 January 1983, p.1; 9 May 1985, p.3. *GMRB*: 18 December 1986, p.2). Even *ZGJYB* only carried one report (No.447, 24 September 1987, p.1) in the period 1987-90 specifically on a teacher training university's correspondence education programme for teacher training (as opposed to its general correspondence education degree and diploma programme). Haughey *et al* (1991) give a short account of the East China Teacher Training University.
27. *GMRB*, 18 December 1986, p.2.
28. The Yangzhou city (in Jiangsu) education bureau combined with the Taizhou Teacher Training School to provide materials for a correspondence education science course for primary school teachers.
29. The primary school teacher training plan is similar, although it requires four years of study with less concentrated face-to-face (20 days rather than 30) and a total of about 2000 hours.
30. They only study one of these as their speciality, along with education, psychology and middle school teaching materials and methods.
31. South China Teacher Training University was going to offer this subject and physical education in 1985 (*RMRB*, 9 May 1985, p.3).
32. The fact that adults other than teachers are involved is usually noted in figures for graduates. See for example: *RMRB*, 9 May 1985, p.3; *WHB*, 13 January 1983, p.1; *GMRB*, 18 December 1986, p.2. A study of the 1983 graduates of Tongji University, a social science university in Shanghai, gives the following profile of them: average age 32 (oldest 50 and youngest 23); 87 (80%) men and 21 women; only one was from the national minorities; 81 with senior secondary graduation before 1968 and 27 after; 18 (17%) were Party members; 38% were employed in design work, 42% in construction, 5% in a factory and 6% in teaching; only one came from outside Shanghai (*Tongji daxue yeyu jiaoyu chu*, 1984, pp.6-15).
33. See *ZGJYB*, No.354, 19 February, 1987 for a full list of higher education institutions with correspondence education, and who administers them.
34. For the pre-Cultural Revolution period I have based my information on *Guan* (1989, p.603), and also Bruckner (1970, pp.162-5) for some statistics.
35. An evening university was set up in 1957.
36. Zhou Jianshu gave this figure to me as 3-4,000 (interview 19 May 1990).
37. This may only be for Beijing.
38. This figure is only for degree (*benke*) students.

39. Zhou Jianshu gave me a figure of 80,000 for enrolment in 1990, but this seems very unlikely, and I have assumed that he translated it incorrectly from Chinese. He also estimated the graduates as 1,000-1,500 per year.
40. However, the figures in Table 7.3 do not bear this out, unless the 11,000 includes a backlog of graduates who did not finish their studies before the Cultural Revolution, and graduated after it.
41. *Guan* (1989, p.603); Zhou Jianshu interview 19 May 1990.
42. Zhou Jianshu (interview 19 May 1990).
43. *RMRB*, 4 April 1984, p.3; *RMRB*, 5 December 1984, p.3. This latter source on the journalism course gave an admissions figure of 22,000. It is unlikely that either of these is a degree or diploma programme.
44. These figures on staff were given by Zhou Jianshu (interview 19 May 1990).
45. *RMRB*, 29 May, 1980, p.5.
46. In 1984 it was 3:1 (*Tongji daxue hanshou bu*, 1984a, p.4), and in 1986 28% (3.8:1) were correspondence education students (*JPRS*, CPS-86-077, pp.53-5).
47. 10% is quoted in *Tongji daxue hanshou bu* (1984a, p.2) and 680 out of 4045 (16.8%) in *Tongji daxue yeyu jiaoyu chu* (1984, p.36).
48. By 1980 there were three specialities, but they are not named (*RMRB*, 12 August 1980, p.3). The two I quote are taken from speeches to the first graduation ceremony of the 1978 intake (*Tongji daxue yeyu jiaoyu chu*, 1984, p.1).
49. There is a recent report of the Railway Correspondence Education Institute, which re-opened in the early 1980s. It has produced 4,000 diploma and degree graduates in the last ten years (*ZGJYB*, No.1135, 26 November 1991, p.2).
50. In fact the conventional universities associated with such ministries are seen as part of the regular higher education system subject to all the State Education Commission regulations, even though they are administered differently. It is not surprising therefore that their correspondence education departments are similarly guided by State Education Commission policy.
51. Bruckner (1970, p.178) talks about students enrolled on 'advanced courses'.
52. A fifth institution is also listed from Ningxia Huizu Autonomous Region, but not included in the number of institutions (its student figures are, however, included).
53. This figure is anomalous, and a more appropriate figure of 2,000 is given as the 'predicted number of graduates'.
54. However, in 1988 Sichuan Province correspondence education had 10,900 graduates, three times the admissions for that year.
55. The information on this institution can be found in the following reports in *RMRB*: 30 October 1984, p.3; 1 February 1985, p.3; 19 June 1987, p.3; 7 February 1988, p.3.
56. The information on this institution was reported in: *RMRB*, 24 March 1985, p.3; *RMRB*, 28 August 1987, p.3; *GMRB*, 22 October 1986, p.1; *GMRB*, 19 October 1987, p.1.
57. *RMRB*: 4 September 1984, p.3; 10 September 1984, p.4; 12 September 1984, p.4; 19 September 1984, p.3; 6 December 1984, p.3; 7 January 1985, p.3; 29 December 1987, p.3; 12 January 1988, p.3; 16 & 17 March 1988, p.3.
58. The Chinese Logic and Language Correspondence University was set up by the Chinese Logic and Language Research Society (*Zhongguo luoji yu yuyan yanjiu hui*) in 1982 (*RMRB*, 11 April 1982, p.4). The Beijing Humanities Correspondence University was started in October 1984 by *Renda* and *China*

Youth (Zhongguo Qingnian Bao), the newspaper for young people. The 'Get Rich' University was set up by the Chinese Science and Technology Advice Centre (*Zhongguo keji zixun zhongxin*) and the Technology Economics Advice Service Company (*Jishu jingqi zixun fuwu gongsi*) in March of 1985. The People's Daily Correspondence Department is intended for working journalists and students and was started by the *People's Daily* in January 1985.

59. *RMRB*, 31 December 1983, p.5.
60. *RMRB*, 9 September 1986, p.3.
61. 1982-5 figure for graduates of 60,000 given in *RMRB*, 8 September 1986, p.3.
62. *State Council Bulletin*, No.4 (527), 1 March 1987, p.160.
63. Unlike the RTVU I have been able to locate only one empirical study of students' learning experience in correspondence education, and have been unable to locate any study material to analyse. I specifically asked for empirical studies at Hangzhou University when I interviewed Professor Liu Yuling, the Vice-Dean of the Adult Education Department, in May 1990, but was told only informal ones had been carried out.
64. This is even carried through to regulations covering a teacher's obligation to respond to students queries (by post) and return marked assignments within specified periods (*Tongji daxue hanshou bu*, 1984, p.6).
65. In other documents they discuss study in much the same way as *Renda* does, for example: *Tongji daxue yeyu jiaoyu chu* (1984).
66. This is discussed as a way of overcoming difficulties of study (*Tongji daxue hanshou bu*, 1984a, p.1). A sample contract is given in *Tongji daxue hanshou bu*, (1984b, p.60).
67. This limitation was admitted by Zhou Jianshu, the former Vice-president of the *Renda* correspondence education department (interview, 19 May 1990).
68. This limitation was recognized by Professor Liu Yuling, Vice-Dean of Adult Education Department, Hangzhou University (interview 12 May 1990).
69. One of the conditions is that the speciality must be one that is greatly needed.
70. The small number of students involved in both studies makes it difficult to draw general conclusions, and they certainly reinforce the 1987 regulations' stress on the need for research on correspondence education.
71. Unfortunately I only have access to a set of *Tongji* internal documents for 1984 that were fortuitously given to the International Documentation Centre for Distance Learning at the Open University.
72. Unlike the RTVU there does not seem to be any central government policy limitation on taking in school leavers, if the 1987 regulations are still relevant.
73. The amount of school leavers in the total adult education intake is ignored because it does not affect the final percentage. Also the other independent correspondence education institutions have been omitted because there is some doubt as to their level.
74. Note that these figures do not match those given in Table 6.3 because the source is not the same. I have used different sources because they are compatible across correspondence education and the RTVU.
75. This number is calculated by taking the proportion of correspondence education to correspondence education and evening universities for 1985, 1987, 1988, and 1990 and multiplying it by the difference of total school leavers and the RTVU intake of them.
76. *JPRS CPS-86-077*, pp.53-5.

77. The 1988 figure appears to be an unusual one, but without the 1989 figure it is difficult to be sure of a trend.
78. The Vice-Dean of Adult Education in Hangzhou University certainly saw that as a reason for the recent general decline in adult students (interview 19 May 1990).
79. This may not be through specific regulation (see note 72), as was the case for the RTVU, but part of the general shift away from diploma and degree qualifications.
80. *State Council Bulletin*, No.4 (527), 1 March 1987, p.161.
81. The number of single-course students has never been high in university correspondence education departments, unlike the RTVU.
82. This is despite the fact that a study year or a credit system can operate (*State Council Bulletin*, No.4 (527), 1 March 1987, p.161).
83. Bruckner (1970, pp.193-205) gives details of five conventional agricultural universities who operated correspondence education, and two rural correspondence universities that were operated by provincial education authorities.
84. Reports can be found in: *SWB FE/7998/BII/13*, 9 July 1985; *RMRB*, 22 August 1984, p.5; *RMRB*, 28 November 1984, p.2; *GMRB*, 21 November 1987, p.1.
85. *RMRB*, 24 May 1980, p.3; *RMRB*, 29 October, 1983, p.5. In fact other letters in the same 1980 issue were calling for correspondence education including a central correspondence university.
86. There were 59 such institutions in 1988 (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, p.24). An example of one of these is the South China Agriculture University that had three correspondence education specialities with 120 students in 1982 (*RMRB*, 4 May 1982, p.2). *Tongji* offered a speciality in 'water supply' for students in Guangxi (*Tongji daxue yeyu jiaoyu chu*, 1984, p.3).
87. *GMRB*, 23 April 1988, p.1.
88. *ZGJYB*, No.991, 19 March 1991, p.2.
89. Interview with Zhou Jianshu (19 May 1990).
90. For example, in Hangzhou University the adult education department has negotiated with sixteen provincial government departments courses for various 'Professional certificates', but these were not through correspondence education (interview with Professor Liu Yuling, Vice-Dean of Department of Adult Education, 12 May 1990).
91. This improvement may not continue. The 1988 admission figures, which will be the basis of future graduations, give the lower figure of 79% (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.90-1).
92. In passing it is worth noting that in 'agriculture', 'forestry' and 'physical education', all practical subjects, correspondence education is the largest contributor (66-79%)! It also makes significant contributions (around a third) to medicine, teacher training and science.
93. This was a point made by Professor Liu Yuling (interview 19 May 1990).
94. *Tongji*: *RMRB*, 7 August 1980, p.4. Teacher training: Mr. Wang Yuanlin, Director, Teacher Training Department, State Education Commission (interview 19 May 1990).
95. *ZGJYB*, No.360, 5 March, 1986, p.3.
96. Even the 1963 regulations said that correspondence education should have its own staff and not just use the full-time university's staff (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.611).

97. My estimate for the *Renda* ratio is 1:50, better than the 1:20 that I estimated for *Tongji*. The estimate depends upon what proportion of time is spent by part-time staff; I assumed 25%, and an enrolment of 6,500 (see Table 7.3).
98. This will become a variable cost, as it will be related to student numbers.
99. With enrolment figures there would be 500 per speciality, but if admission figures are used (which give the number in one year using the first-year material) this drops to 200.
100. In 1982 the Ministry of Education issued a document on common material for 20 basic courses in industrial universities' correspondence education departments (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.608).
101. The 1987 regulations raised it to 30%, and Zhou (1984, p.355) said it was 25%. This latter figure conforms to the study patterns discussed earlier.
102. This was a point made by Professor Liu Yuling (interview 19 May 1990).
103. In the official review of correspondence education in universities (1949-81) the section on teaching and learning work starts with a review of the aspects of the regulations that affect quality (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.607). The 1987 regulations deal with the need to evaluate the quality (and effectiveness) of provision (*State Council Bulletin*, No.4 (527), 1 March 1987). Those who actually provide it are also anxious to underscore the quality of their provision (*Tongji daxue yeyu jiaoyu chu*, 1984, pp.1-3).
104. Professor Zhou Jianshu was very concerned about these bogus colleges that had no full-time staff and seemed more concerned to make money and issue worthless diplomas. He estimated enrolment in such colleges at 1 million, and said they preyed on rural students who were anxious for qualifications (interview 19 May 1990). A report of such institutions was given in *CD*, 26 May, 1983.
105. The quality analysis of 1983 graduates at *Tongji* said that the most important problem was how to ensure that correspondence education quality is up to full-time higher education levels (*Tongji daxue yeyu jiaoyu chu*, 1984, p.6).
106. The 1987 regulations have a chapter on teachers that starts by stating they are part of a university's teaching team, and hence of equal standing.

CHAPTER 8 THE HIGHER EDUCATION SELF-STUDY EXAMINATION SYSTEM

INTRODUCTION

In the mid-1980s there was a great deal of enthusiasm for self-study in China, to the extent that there was talk of a 'self-study fever' (*zixue re*) (McCormick, 1986, pp.87-92). At that time it was not clear that it would continue so, especially as by the second half of the decade the eagerness of the government to expand higher education had diminished. But ten years after it started the system was celebrating its anniversary with startlingly large figures for participation (15 million) that indicated no diminution in the early enthusiasm, and He Dongchang, Vice-Minister of the State Education Commission, was praising its great achievements.¹ It has been seen as an important element of educational reform and as a development that should continue on its own road.² However, as I will show later there is now a policy encouraging it to combine with other forms of distance learning, and there are already examples of joint activity.

Despite its importance within China there are almost no accounts of the system,³ so in this chapter I will try to give a general account of it, including the nature of the teaching and learning.⁴ I will also examine the principles upon which it has been founded, some of which relate to the headings derived from Chapter 5 that have been used to analyse the two distance learning systems in the previous chapters. Then I will move to how the system has developed before using the headings of learning, access, economic development and cost effectiveness to examine the promise of the self-study examination system. Finally I will consider the role of the system including the development of links among the distance learning systems, as a prelude to considering them all within one province in Chapter 9.

THE PRINCIPLES UNDERLYING THE SYSTEM

There are a number of principles upon which the system is based that are enunciated at all levels by those working in the self-study examination system. The opening words of He Dongchang, Vice-Minister of the State Education Commission, in his speech to the third

national conference were on the principles of open education, spare-time education and flexibility of study. Later in the speech he talked about quality and about separating support to students and the examination of them. My interview in Zhejiang revealed the same principles. It is not surprising then to find them in the latest regulations issued by the State Council in 1988.⁵ *Guan* (1989, pp.565-6), writing in Chinese, discusses these principles in a way that matches some of the issues in Chapter 5 on the *Promise of distance learning*, ones I examined in Chapters 6 & 7 on the RTVU and correspondence education. I will deal with each of the principles in turn, and return to them when I consider the promise of the self-study examination system.

Openness is defined in terms of open entry. It is taken up in the third paragraph of the 1988 regulations, where it is stated that the self-study system is open to "all PRC citizens without distinctions of gender, age or nationality group" (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, p.7). Further, as there is no entry qualification requirement, this extends the openness beyond that of the other two distance learning systems. *Guan* (1989) argues that qualifications only indicate what has been studied, but do not indicate a person's capabilities. Experienced adults, he argues, will bring a stock of knowledge and an ability for self-study that school graduates lack, allowing them to succeed without the usual qualifications.

Guan (1989) argues for the principle of **flexibility** on two counts: one is a choice about *what* to study, and the other a choice of *how* and at what *rate* to study. The choice about *what* he only equates to the kind of qualification, arguing that there is a large range from single subjects, through foundation subjects (*jichuke*), diplomas, degrees, and professional qualifications.

The principle of **spare-time study** means that the problem of releasing workers from production to study, that has plagued adult education since liberation in China, does not on the face of it exist with the self-study examination system. The subsequent loss to production is therefore avoided, and this is why the principle of 'spare-time study' is emphasised.

Quality as a principle has two aspects: quality through standards (usually academic) and quality of the process of learning and assessment (examining). The discussion of this principle of quality by *Guan* (1989, p.566) only deals with the first of these, though others have recognized the importance of using regulations to ensure quality in the process.⁶ The standards are protected, so *Guan* argues, by the national regulations.

The principle of the **separation of study and examination** links to some extent to the principle of quality, and it makes a virtue out of the fact that the examination system is not connected to the teaching and learning. Although the system gives guidance through the syllabuses (and makes regulations on, and is involved in, material production), the examinations are quite separate from any support to students. *Guan* (1989, p.656) uses a graphic Chinese phrase to describe this situation *liu qin buren* which means "have nothing to do with relatives". This implies that a combination of teaching and assessing students in this non-formal sector could give scope for corruption, with for example a teacher allowing his or her students to pass even although they were not up to standard. Having the assessment independently constructed helps to avoid this.

THE DEVELOPMENT OF THE SELF-STUDY EXAMINATION SYSTEM

In this part I will deal with the early trials of the system, the national system that followed, the growth in the numbers participating, the subjects and specialisms offered, and the forms of support available to those studying for the examinations. This will give a basis for a discussion of the promise of the system in the next part.

The trials

The enthusiasm that I noted earlier is indicative of the high level of support that the development of this system had from its inception. Initially it was seen as a way of expanding the provision of higher education and one of the many forms that was being encouraged following the 11th Party Congress in the period immediately after the fall of the 'Gang of Four'.⁷ The government work report to the first session of the Fifth National People's Congress, in February 1978, said that an examination system should be set up for people who were studying in their spare time, and that these examinations were to be

equivalent to those in conventional higher education. Deng Xiaoping himself even recommended in a speech on "The current situation and tasks" (*muqian de xingshi he renwu*), in 1980, that self-study should be one form of education. In May of that year the CCP Secretariat had discussed the problems in education and pointed out the need for a self-study certification system for young people who could not get into university. In Beijing, where the problem of a lack of opportunity was great in the face of fierce competition, the Central Committee instructed the Workers and Peasants Education Office in June to draft initial views on setting up an examination system for higher education spare-time study, and in July regulations were drafted and approved in the subsequent months. In January 1981 they were issued as a report by the State Council, indicating how the system would be set up.⁸

The report laid down some simple principles, and set down two basic methods of running the trial. The principles were: that the system was open to any PRC citizen without restriction as to educational qualification or age; the student must bear the costs;⁹ the student must have his or her work unit's permission (if he or she was employed); and that the state would recognise the qualification, but would not guarantee a change of job as that would depend upon the local situation. The way the trial was implemented varied between provinces depending upon the local conditions, but was either based on existing higher education institutions or on a local committee. Thus using a credit system a student could accumulate credits for individual courses or those of a whole speciality through an existing college and then be awarded a graduation certificate for the speciality from the local committee responsible for self-study. In this case the colleges organized the examinations under the guidance of the local committee. Alternatively, the committee could itself organize unified examinations for the province and then award the certificate. The report also established a National Higher Education Self-study Examination Committee (*Quanguo gaodeng jiaoyu zixue kaoshi weiyuanhui*) that included representatives from the Ministry of Education, other ministries and bureaus, and higher education institutions. Similarly it envisaged committees at provincial level.

It is worth spending some time on describing the trials and the subsequent evaluation, because they provide the most detailed analysis of the system in operation that exists. The trials took place in the cities of Beijing, Tianjin, Shanghai and Liaoning Province during 1981 and 1982, each taking a slightly different approach. Beijing started first with the universities organizing the examinations, courses common to all specialities being set in a unified system across the city, and specialist courses being set by particular universities running that speciality. Two sets of examinations were run in 1981 and four in 1982, and the overall results are shown in Table 8.1. In Tianjin a much smaller scale trial was undertaken (see Table 8.1), with two colleges each running the examinations of a speciality in the first session of 1982, and a variety of organizations providing tuition through classes, tutorial centres and self-study books. Shanghai was the largest trial in terms of student numbers (see Table 8.1), and six universities organized the specialities, with some fourteen organizations putting on lecture and tutorial classes, and later experimental and field work. Specifically designed texts were also constructed, and television tutorial programmes produced for the philosophy course. Liaoning used three colleges to organize the nine specialities with almost as many participating as in Shanghai (see Table 8.1).

Table 8.1: participation in first self-study trials in Beijing, Tianjin, Shanghai and Liaoning (1981-2)

<i>Location</i>	<i>Beijing</i>		<i>Tianjin</i>	<i>Shanghai</i>	<i>Liaoning</i>
<i>Year</i>	1981	1982	1982	1982	1982
<i>Registered</i>	11121	12926	902	15494	15347
<i>No. sitting</i>	9577	12177	852	14485	11312
<i>No. passed</i>	3985	5565	404	6982	2624
<i>% passed</i>	41.6	47.4	47.4	48.2	23.2

Apart from Liaoning the results are quite respectable. The figures are clouded by the fact that the numbers are actually for 'person-courses', that is one person registering for, sitting, or passing one course.¹⁰ The Shanghai and Tianjin data also gave an indication of the number of people participating: in Shanghai 6,858 people made the 15,494

registrations giving an average of 2.26 courses per person; in Tianjin 527 made the 902 registrations, giving an average of 1.71.

During the trial (March 1982) a conference was organized by the Ministry of Education to review the experiences and deal with problems. The role of the conventional higher education institutions was evident in a call for them to take on co-ordination. Even those not involved in managing the examination could be involved, though no specific task was identified. However, one significant feature was the role of colleges in establishing the standards through using existing teaching plans or creating new ones. This was not to be done at the expense of lack of co-ordination among the colleges - if a speciality existed somewhere a new one should not be produced. A great deal was made of the need for support for those studying and here a variety of institutions were seen to have a role. (In Shanghai these had ranged from the city's youth advice centre, youth palace, libraries, teacher inservice college, to regular universities.) The need for experimental work for science and technology specialities was a particular problem for support. Inevitably it was found that in areas where education was well developed there were likely to be more people able to come forward to self-study examinations, posing a real challenge in less well developed, and hence rural, areas.

Establishment of a national system

The completion results shown in Table 8.1 did not deter the authorities who set about developing the system. In early 1983 the system was formalized nation-wide with the establishment of the National Higher Education Self-study Examination Guidance Committee (*Quanguo gaodeng jiaoyu zixue kaoshi zhidao weiyuanhui*), and the provinces were requested to set up local committees.¹¹ The functions of the national committee are to:

- a draw up policies for the examinations;
- b direct and guide the provincial committees;
- c draw up plans and principles for the various specialities;
- d draw up unified examination criteria;
- e carry out research into the examination work.

He Dongchang, the then Minister of Education, was given the chair with seven vice-chairs from ministries, central departments and universities (including a former deputy minister of education, now in charge of higher education examination work), plus 21 other members.¹² The committee was under the State Council with an office in the Ministry of Education. The local committees, working under the provincial government, had the following functions:

- a carry out the policies of the national committee;
- b examine, approve and announce examination plans in accordance with the unified criteria;
- c organize the examination work, issue graduate certificates and single-subject certificates, and guide and direct people to self-study;
- d guide and supervise approved adult colleges;
- e organize the unified examination for non-approved adult higher education colleges.

The last two functions are the most important features of this legislation, important not just for those involved in self-study, but for the whole of the 'non-conventional' sector of higher education. Regular full-time higher education colleges operating within the self-study examination system are approved by the Ministry of Education (now the State Education Commission), or by a provincial authority, and can therefore be responsible for their own, and indeed others' examinations, requiring only supervision by the local self-study committee. In fact they are effectively sub-contracted to run the examinations for the committee. This involves the setting of the paper, marking, and organizing examinations that involve field work (Cheng, 1988). But the principle of 'separation of examination and study' is not upheld in practice because many of the universities responsible for setting examinations are also involved in running classes, as examples from Beijing show.¹³ He Dongchang pointed out that because some universities did not separate examining from study their corrupt practices were a threat to the quality of the system.¹⁴ The adult education sector (not including the RTVU), on the other hand, does not have the right to run its own examinations. So, not only do the self-study students have a way of obtaining a recognized qualification, but a system exists to regularize the

non-conventional sector and give its graduates an opportunity to achieve parity with the conventional sector.¹⁵

At the level of prefectures and municipalities committees were also set up. Their functions are to organize specific examinations, provide management and guidance for any learning support to those studying, and to organize the evaluation of the ideology and morality of graduates (Cheng, 1988). At county level the professional office (of education) should have one person who is responsible for self-study.¹⁶ The national committee is responsible for the provincial committees, and also for speciality committees whose work it is to write the outline for the nationally unified examination courses in the speciality. (I will return to this shortly.) By 1990 there were 14 such committees under the national committee.¹⁷ Another Ministry of Education notification in 1983 authorized provincial committees to establish specialities according to local needs where no such one existed under the national system.¹⁸ They had first to get the agreement of the Ministry of Education.

Student numbers

By 1985 the system had become national with 29 provinces having set up committees. The development in terms of statistical data is difficult to chart because there seems to be no regular reporting format or indeed agency. The State Education Commission does not include examination registrations or passes in its annual figures.¹⁹ Table 8.2 (overleaf) shows what data are available, and, despite the wide variety of sources and the patchy reporting, the figures are reasonably consistent.²⁰

What Table 8.2 shows is a steady growth, and, in absolute terms very large general participation. Of course being able to say that 15 million examinations were sat in the ten years of the system's operation is impressive, and indeed that over 3 million people per year are involved, but what is more telling in terms of its contribution to higher education is the number who get certificates. Only the 1988 collection of official statistics contains complete data for the self-study examination system, and the summary figures are given in Table 8.3 (p.268).

TABLE 8.2: participation (thousands) in higher education self-study examination 1981-91

<i>Year</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>
Annual statistics											
No. of sittings	11.1	38.8	n.a.	700	n.a.	3,000	3,000	n.a.	n.a.	3,700	n.a.
No of people	n.a.	n.a.	259	n.a.	n.a.	n.a.	n.a.	2,600	n.a.	4,600	3,460
Course certificates	4.0	15.6	114	n.a.	n.a.	166	1,500	1,447	n.a.	n.a.	n.a.
Diplomas awarded	-	-	-	n.a.	n.a.	3.4	n.a.	99	150	n.a.	n.a.
Cumulative statistics											
No. of sittings	11.1	39.9	n.a.	n.a.	3,000	n.a.	n.a.	n.a.	n.a.	n.a.	15,000
Course certificates	4.0	19.6	n.a.	n.a.	n.a.	2,500	n.a.	4,647	2,000	4,700	n.a.
Diplomas awarded	-	-	-	0.1	n.a.	11.4	44.7	282	n.a.	470	528

Sources: 1981 - *Zhongguo jiaoyu nianjian bianjubu* (1984, pp.624-7); 1983 - *RMRB*, 30 January 1984, p.3; 1984 - *RMRB*, 8 December 1984, p.1; 1985 - *ZGJYB*, No.952, 5 January 1991, p.1; 1986 - *Gaodeng jiaoyu kaoshi bangongshi*, (1989, p.268), *ZGJYB*, No.359, 3 March 1987, p.1, *JPRS*, CPS-86-080, p.41; 1987 - *Cheng* (1988); 1988 - *Guojia jiaoyu weiyuanhui jihua jianshisi*, (1989, pp.106-9); 1989 - *ZGJYB*, No.521, 22 March 1988, p.1; 1990 - *ZGJYB*, No.952, 5 January 1991, p.1, *ZGJYB*, No.1021, 11 May 1991, p.3, *ZGJYB*, No.875, 10 July 1990, p.1.

Table 8.3: official statistics (thousands) for the self-study examination system for 1988

	<i>First half of year</i>	<i>Second half of year</i>	<i>Cumulative</i>
<i>No. registered</i>	1,735	1,561	n.a.
<i>No. sitting</i>	1,388	1,213	n.a.
<i>Certificates</i>	734	713	4,647
<i>Diplomas</i>	49.6	49.2	282
<i>Degrees</i>	0.094	0.187	0.468

Source: *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, pp.106-9).

This gives overall success rates of 53% and 59% of the number who actually sat the examination and 42% and 46% of those who registered for the two halves of the year. These are better than the results in the trials (Table 8.1).

Table 8.4 is derived from Table 8.2, using cumulative and annual figures to calculate missing data, and it gives the variation from the first graduations to date. This table indicates a rapid rise towards the end of the 1980s and a decline (now halted?) in the early years of the 1990s. I will return to these data later when considering the openness of the system, and its contribution to economic development.

Table 8.4: graduations (thousands) for the self-study examination system 1984-1991

<i>Year</i>	1984	1985	1986	1987	1988	1989	1990	1991
<i>Graduates</i>	0.1	7.9	3.4	33.4	99.2	150	100	58

Source: Table 8.2. The 1991 figure is for the first half of the year only.

Programmes of study

The growth in numbers participating has been paralleled by that of the specialities offered. Table 8.5 (overleaf) shows their numbers over the period of development. The specialities cover a wide range including agriculture and the usual social science, science

and technology, and humanities areas. There are, however, no data reported on the breakdown of the numbers taking each of these areas.

Table 8.5: the development of specialities in the higher education self-study examination system 1981-91

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	91
No.	8	19	30	n.a.	60	60	n.a.	76	97	102	120

Sources: 1981 & 1982 - *Zhongguo jiaoyu nianjian bianjibu* (1984, pp.624-7); 1983 - *RMRB*, 30 January 1984, p.3; 1985 - *RMRB*, 5 June 1985, p.1; 1986 - *ZGJYB*, No.952, 5 January 1991, p.1; 1988 - *ZGJYB*, No.606, 6 October, 1988, p.1; 1989 - *ZGJYB*, No.875, 10 July 1990, p.1; 1990 & 1991 - *ZGJYB*, No.1021, 11 May 1991, p.3.

This focus on degrees and diplomas masks the shift to emphasising inservice and continuing education, that has been a feature of all sectors of higher education. Indeed Li Peng, in a presentation of certificates to self-study students, while recognising the importance of diplomas, warned of credentialism.²¹ This shift can be looked at in two ways. Firstly, those students (the majority) who only take single courses, and probably have no intention (or hope) of taking a degree or diploma, can be considered as being involved in inservice or continuing education. This was a point made by a Vice-Chair of the national committee in looking back over the ten years of the system's development, noting that these courses will aid self-study in students' work.²² Secondly, the self-study system has been developing professional certificates since 1987, just before this was officially legislated for in 1988 (see Chapter 4).²³ An example of these certificates is the one awarded by the Chinese Statistical Cadre Television and Correspondence Institute (*Zhongguo tongji ganbu dianshi hanshou xueyuan*), set up by the National Statistics Bureau in 1985. By 1987 it had awarded professional certificates to 50,000 statisticians using the self-study system, with a predicted further 20,000 in 1988.²⁴ The self-study system has also been developing courses at a secondary vocational level (*zhongzhuan*) since 1985 when the regulations on this were published.²⁵

Student support

The term 'society assisted learning' (*shehui zhu xue*) is used to contrast with self-study and includes a range of support for students. Some of the support is part of the

examination system (e.g. syllabuses and reading lists), but the 'social assisted learning' usually refers to support from other organizations. I will consider the range of support under the medium through which it is offered, that is, print, tutorial, and audio-visual.²⁶

Print

There are several components to the printed material available to self-study participants: official syllabuses; past examination papers and answers; conventional textbooks; specifically written texts; magazines. I will consider each of these in turn.

Syllabuses

Every course within a discipline has a published syllabus (*dagang*), whether it is one organized nationally or locally.²⁷ I have examined a number of syllabuses (see Appendix 6), and, although they are all basically detailed statements of content set out like any examination syllabus, they contain differing amounts of study aids and advice. Most syllabuses do no more than give vague overall objectives for the course, and none gives any more than a brief statement on how to study, usually stating the obvious about analysing what is being read and grasping the main points. Few of the texts recommended in the syllabuses are specifically written for self-study examination students. Examination syllabuses would not normally contain information about study, but for isolated self-study students this is important, unless of course specially designed texts are available, and I will examine their development and availability shortly.

Past papers

It is very common in China to have books containing past papers along with answers. This is done for the major entrance examination for conventional and adult higher education, being a reflection of the competition and importance of getting into college. Thus it is not surprising to find similar texts for the self-study examination system, and they are likely to be an essential aid to those relying upon self-study. One example is a book of 32 examination papers and their corresponding answers.²⁸ These examinations were for 17 of the Shanghai city specialities covering 27 courses, most of which were

offered for the first time in 1983. This was the third set of examinations for Shanghai taken in November of that year. The aims of the book, stated in the introduction, were addressed to three audiences. For self-study students the aims were:

- a to understand the higher education self-study examination's requirements;
- b to understand the examination requirements for each course's basic knowledge and practical useful capability;
- c to improve study methods continuously;
- d to grasp the knowledge and techniques.

It also aimed to help those supporting students (e.g. colleges) to guide correctly the students in grasping the knowledge, valuing training capability and overcoming mechanical memorization. A third audience was others involved in the system, and the authors hoped that it would help everyone to work together to grasp the requirements and the standards of this new system of education.

The answers provided in the book gave little elaboration, except in the case of subjects like mathematics and statistics where some of the calculations were shown to arrive at an answer. Although this book would undoubtedly help students understand the requirements of the examination system ("a" and "b"), it would be unlikely to lead to an understanding of the subject and may encourage memorization. (A problem noted in the conventional system in Chapter 3, p.51.) For example common mistakes, or any confusions and ambiguities in the questions, were not pointed out. But it would be difficult to imagine an examination-based system without such books of past papers. It perhaps simply emphasises the dangers of such a system in the kind of climate of study in China, where examinations have such a negative effect (a point I made in Chapter 3).

Textbooks and self-study texts

As I noted above, apart from the listing of conventional textbooks in the examination plans and syllabuses, there are specially written books for self-study examination students. These are different from the many self-study books that are on sale, not aimed at any particular system. Indeed for them to be legitimate they have to have the *imprimatur* of the self-study committees. In 1986 the national committee published a notice on the

production of self-study materials, recognizing that most material was that used in conventional universities.²⁹ This notice laid down basic principles for producing materials, but is very general. All it says about the needs of self-study students is that they need to: grasp the basic theory, the basic knowledge and the basic technical capability exercises; combine theory and practice; develop capability to analyse and solve problems. In terms of actually producing materials it suggests that both correspondence education material and conventional university material should be investigated. This experience combined with the special characteristics of self-study can then be used to produce material. The only really specific instruction is the number of words for such material.³⁰ When material has been produced in a unified way then it can bear the label: *Quanguo gaodeng jiaoyu zixue kaoshi xuexi yong shu* (National Higher Education Self-study Examination book for study use).³¹ In 1991 there were some 200 groups set up to construct teaching material, though there are no details of just how many texts have been produced.³² Occasionally advertisements for books are seen in *Zhongguo jiaoyu bao*, the educational newspaper.³³

Magazines

A variety of magazines connected with self-study have grown up. Some seem to be of general interest, such as *Zixue* (Self-study), which contains some general guidance but is mainly features and case studies of successful people who used self-study.³⁴ Others are local magazines published as part of the self-study examination system, containing tutorial material related to specific courses, question papers, answers for examinations, short features, book lists, and other notifications such as the examination timetable.³⁵ In addition there are magazines that are associated with specific 'self-study universities', that resemble some of the independent correspondence education institutions discussed in Chapter 7.³⁶ Such magazines provide teaching material, rather than general advice and articles.

Tutorial support

The details of the trials in 1981-2 revealed a considerable amount of this tutorial support made available to self-study students by a range of organizations. There appear to be three basic groups providing this kind of support: universities, mainly the conventional ones; local authorities; informal groups. There are also the 'self-study universities' that I mentioned above, along with others that are based on universities that already exist. The support varies from structured classes (probably lectures) to tutorial groups, although there are no published details of what they actually provide.

The universities not surprisingly have set up classes, some as individual institutions and some as consortia. For example in Beijing a consortium was formed involving the large universities of Beijing University, Qinghua University, People's University, the Beijing Teacher Training University and the Beijing Industrial College.³⁷ Their prime function was actually to set the examinations in five specialities but they also set up a correspondence education centre and an advice centre. In Hebei the science and technology higher education institutions formed a consortium to set up a self-study university.³⁸

In Hebei Province a county self-study examination office set up a tutorial centre to help students with study, answer their questions, set assignments and listen to audio-tapes. Few reports of these local authority initiatives seem to be published, but it is likely that they are more widespread, though not necessarily focusing exclusively upon the self-study system.

What is difficult to judge is just how extensive such provision is now that the system is nationally available, rather than in the trials where it seemed to be widespread. But that tutorial provision is becoming common is indicated by both reports of a variety of forms (e.g. advice centres, tutorial centres and benefit tutorial centres),³⁹ and the fact that some centres are being specifically built. Beijing has such a centre set up for science laboratory work and computing, as well as rooms for sitting examinations.⁴⁰ This substantial building, of some 6000 square metres, also has a language laboratory and a psychology laboratory, and was built by the Beijing city government. In addition to the teaching

functions it also acts as a centre for both student and examination administration, including a room for marking scripts (for 100 markers!).

Audio-visual

In terms of teaching material production print seems to be the dominant medium, and the fact that the regulations on editing such materials were concerned entirely with print reinforces this. Nevertheless it seems to be taken for granted that audio-visual material will be used, including radio, television, audio-tapes and video-tapes (*Guan*, 1989, p.563). As noted earlier, during the trials television was used in Shanghai (along with specifically designed texts), and around that period there were reports of other audio-visual media being used. Again in Shanghai radio programmes were broadcast on political economy to serve both cadres in general and all those intending to take the self-study examinations.⁴¹ In Jiangsu several programmes have a more general appeal and, for example, attempt to help students in the study of a variety of subjects.⁴² The Shanxi Magazine University provided tutorial support in the form of audio-cassettes and these were advertised in *Zhongguo qingnian bao* (China Youth).⁴³ However, these tapes were similarly not directed specifically at the needs of the self-study examination system, but were for the magazine university students as well as those in Staff and Workers' Universities and Universities' Correspondence Departments. There is no reported system by which video material is made available, except by transmission over local television.

THE PROMISE OF THE SELF-STUDY EXAMINATION SYSTEM

As in Chapters 6 and 7 I will consider this promise under the headings of learning, access, economic development and cost effectiveness. As this is the last of the three systems to be analysed, its contribution to economic development will be considered alongside data on the other two, to add to the picture of Chapter 4, where only data on the RTVU and correspondence education were given.

Learning

From the details so far reviewed about the learning experience for students it is difficult to get any sense of what study might be like. The role of self-study is central in the rhetoric of documents and all statements on the system. What little empirical evidence exists also indicates it forms the major part of students' study time. In a survey of a small group of graduates (249) in Beijing a third relied entirely on self-study, without any other 'society assisted learning' to support them.⁴⁴ The print-based teaching material will no doubt emphasize the role of self-study. The regulations and national directives deal with the needs of learners in terms of print, but this does not seem to apply to other forms of support. The provision of support operates on a market principle and hence is not dealt with in the regulations.

As with the other systems I will consider the combination of theory and practice, and measures of success, but first I will look at the way this market principle affects the integration of the various elements of the distance teaching material. It leads to a lack of integration at two levels. Firstly, the assessment system (the examinations) are not integrated with the support system. The provision of syllabuses and examination papers allows support providers to match requirements of the examinations. But the system is not integrated in a way that would allow the assessment to be made appropriate to the self-study situation, for example by having continuous assessment. Indeed this lack of integration is the basis of the principle of separating study and the examinations. Secondly the various elements of the support are not integrated, simply because the providers are so varied. However, the setting up of tutorial centres and study groups could be a move in the direction of integration. More significant is likely to be the integration of groups based on links between the various distance education systems, links that I will return to at the end of the chapter.

But if self-study is so central then it may present problems for another element of the rhetoric, namely 'the link between theory and practice'. In a speech to the third national meeting on the self-study examination system He Dongchang, the Vice-Minister in the State Education Commission, pointed out that theory must be combined with practice, but that in the first ten years the basic focus had been on the theory,⁴⁵ in response to the

rejection of it during the Cultural Revolution. He went on to say that there was a need to correct the objectives, syllabuses and examination content to improve the combination. This means, however, shifting the emphasis and perhaps threatening the basic principle of spare-time study.

Measures of success

I have already hinted at some of these measures in giving the success rates in the trials and the 1988 national statistics (Tables 8.1 & 8.3). There are, however, a number of possible measures, including participation rates, subject pass-rates, and graduation rates. I will look at the evidence for each of these.

If 'self-study fever' was the description for the situation of a few hundred thousand participating in 1983 and 1984, then the 3.5 million in 1991 must top that description! Only the RTVU's *cumulative* admissions on diplomas, single courses, inservice and continuing education top this figure, and then by just a few hundred thousand. If the self-study system's cumulative figure of 15 million is to be believed then it must be the most successful of all the distance learning systems on this kind of measure. But of course if this large-scale participation is at the cost of enormous failures then it may not be a successful learning experience. The 1988 statistics showed overall pass-rates of 53% and 59% of those who sat the examination (Table 8.3). The earlier evidence of course pass-rates in the trials indicated a not unreasonable percentage being successful: around 40-50%. These global figures masked a wide variation in individual course results. Table 8.6 (overleaf) gives the range and the average pass-rates (i.e. the percentage sitting the examination who passed) for the trials in Beijing, and Table 8.7 (overleaf) the courses that produced the extremes.

Table 8.6: average and extreme pass rates for the self-study examination trials 1981-1982

<i>Location</i>	<i>Beijing</i>		<i>Tianjin</i>	<i>Shanghai</i>	<i>Liaoning</i>
Year	1981	1982	1982	1982	1982
Average	41.6	45.7	47.4	48.2	23.2
Maximum	66.0	92.9	50.6	79.2	46.4
Minimum	25.0	23.9	31.6	19.7	11.1

Table 8.7: courses that produced the maximum and minimum pass rates in the trials of self-study higher education system 1981-2

<i>Place</i>	<i>Maximum pass rate</i>	<i>Minimum pass rate</i>
Beijing	Japanese	Political economy
Beijing	Logic	Higher maths
Tianjin	Philosophy	Higher maths
Shanghai	Modern Chinese	Accounting
Liaoning	Japanese	Political economy

Thus despite the differences among the geographical areas there does appear to be a 'course effect', with Japanese being relatively easy and mathematics and political economy more difficult. This 'course effect' was confirmed in 1990 in Zhejiang, although the courses that produced the difficulties were not the same.⁴⁶ There English and Chinese were particularly bad, the latter because it required a knowledge of ancient language, and mathematics was also a problem. Subjects like these are apparently more directly linked to conventional university subjects and hence are more demanding than some of the applied ones. This is largely borne out by a detailed examination of results that were obtained for Zhejiang, although they reveal that there is a 'student-course effect'. This effect means that students studying, say, a practical speciality like accountancy do badly on general courses like philosophy. Table 8.8 (overleaf) shows this by examining the maxima and minima of both the overall pass rates for specialities (i.e. the percentage who obtain a pass in one or more subjects in the speciality), and the pass rates of individual subjects whatever the speciality (although the latter is indicated) in both halves of 1988.

An examination of other courses close to the maxima and minima reveals that they are of a similar type to the ones in Table 8.8.

Table 8.8: maximum and minimum pass rates for various specialities and courses in Zhejiang higher education self-study examination system in 1988

	<i>Minimum pass rate</i>		<i>Maximum pass rate</i>	
1st half-year	%	<i>Title</i>	%	<i>Title</i>
<i>Specialities</i>	30	English	74	Party cadre foundation
<i>Courses</i>	13.5	Modern Chinese	76.6	Industrial accountancy
<i>Within speciality</i>		Chinese language and literature		Statistics
2nd half-year				
<i>Specialities</i>	34.8	Administrative management	88.2	Pricing
<i>Courses</i>	17.2	Philosophy	86.7	Pricing principles
<i>Within speciality</i>		Accountancy foundation		Pricing

These were supplied by Mr. Huang Fenggeng, and are computer generated statistics.

It might be supposed that the examinations of courses that are set locally would give better results than those set nationally. The results relating to Table 8.8 show that this is not the case: for the second half of the year (the only data available) the courses with the maximum and minimum pass rates are both nationally set.

The aggregate figures, that hide these course and student effects, give 44% and 53% for the pass rate of those who sat the examinations in the first and second half of 1988, respectively, lower than the national figures quoted earlier (from Table 8.3).⁴⁷

Pass rates only show part of the story even at the level of individual courses, because only a proportion of those who register for the examination actually turn up to sit it. Although as a measure of 'success' this may be difficult to interpret, it is an important one. If percentages are worked out from Table 8.1 for the numbers who actually sat the

examinations in the 1981-2 trials then attendance was fairly high (86%, 94%, 93%, and 74%). These are very much higher than the later figures for Zhejiang, where the range was 40-55%,⁴⁸ and slightly higher than the national figures given in Table 8.3 (80% & 78%). The national figures of those who registered actually passing for the two periods in 1988 were 42% and 46%. These are very poor overall rates, at best just under half those registering actually passing the examination. But as I noted this may be too strict a way of looking at success, as examination candidates may not turn up for a whole variety of reasons including a judgement about their readiness to sit the examination. After all they have to register three months in advance, at which time they must make some prediction about their future readiness. However, most of the overall failure occurs for those who sit the examination, not those who fail to turn up. The self-study examination system does not compare well with the other two distance learning systems, as Table 8.9 indicates. Even the RTVU self-study students do very much better than those in the self-study examination system.

Table 8.9: course pass rates for distance learning systems

	<i>Maximum</i>	<i>Minimum</i>	<i>Average</i>
<i>RTVU</i>			
Full-time	95	77	89
Self-study	93	44	72
<i>Correspondence Ed</i>	n.a.	n.a.	90
<i>Self-Study</i>	87	30	44

Sources: RTVU Table 6.7; correspondence education Chapter 7, p.235-6; self-study examination system Table 8.3.

Obtaining a pass in one course is what the majority of participants in the system are aiming at, but for those that are intent upon obtaining a diploma or degree success must be measured by the rate of graduations. Again there is only limited evidence from the study of Beijing graduates quoted from earlier.⁴⁹ This does not give data for the number who eventually made it compared with those who set out to do so, but rather the rate at which the graduates progressed. Thus for those doing the Chinese Language speciality, with ten courses, the average number of examination sittings was 15.1, with the greatest being 23

times. This gives an average number of attempts at 1.5, meaning that on average students are taking about half of their courses twice, with some doing them all twice! In the Law speciality with 13 courses the average is 18 times with the maximum of 31 sittings to complete the diploma. The result of this kind of retake pattern is likely to be either taking a much longer time to graduate (on average 50% above that expected), or having a very disrupted study pattern (e.g. trying to revise for one retake while doing another for the first time). These kinds of data are not comparable with the graduation rates that can be estimated for the RTVU and correspondence education. Chapters 6 and 7 gave estimates for these two systems with very high rates of between 80-90% for the whole of RTVU, and 87% for one study of correspondence education graduates. Despite the difficulties of calculation and comparison, these figures indicate that the RTVU and correspondence education are healthy systems giving their students a real chance to succeed, but the self-study examination system students must be persistent to succeed.

These figures for 'through-put' are partly an indication of the quality of the learning experience, but also a factor in the cost effectiveness of the institution, and I will return to them later.

Access

Open entry

Guan (1989, pp.565-6) uses *openness* to cover what I have called *access*, that included *satisfying demand*, *open entry*, *access for the disadvantaged* and *open learning*. He focuses almost exclusively on open entry, without looking at satisfying demand or access for disadvantaged groups, but I will deal with each of these three.

The defence of open entry by *Guan* (1989), in terms of the capabilities of adults to cope with self-study, is not an argument that the RTVU staff would employ. CRTVU staff invoked the issue of threat to quality in relation to open entry, but the self-study system is not worried, using the phrase *kuanjin yanchu* (wide entry, strict [narrow] exit) (*Guan*, 1989, p.656). CRTVU staff also talked about the need for planning, which open entry made difficult if not impossible. Staff in the self-study system would agree with them, but

at a more practical level of having to ensure that places are available for people to sit the examination, because a poor turn-up rate causes problems.⁵⁰ What they do not concern themselves with is the effect on planning labour allocations, as there is no commitment to job allocation for self-study graduates. This lack of job allocation is true in both correspondence education and the RTVU, but perhaps the lower level of commitment (especially financial) to supporting and administering students in the self-study system lowers the anxiety level, because open entry does not in this case imply an open commitment to expenditure.

But, like general arguments on equality of opportunity, equality of *access* could be seen as a token if open entry simply results in a large number of failures.⁵¹ The investigation of pass rates in the last section indicates that this kind of problem exists, with average overall rates of success (from registration to obtaining a certificate) being around 45%. Without more detailed empirical information on why students do not turn up, and the causes of failure, it is not possible to evaluate this aspect of *openness*. However, it is likely that insisting on the equivalence with full-time education, and using its staff to draw up syllabuses and examinations, will mitigate against adult students who do not have the conventional knowledge. This counters *Guan's* optimism about adults' experience making up for a lack of formal entry qualifications. Indeed the fact that students do less well on conventional university subjects reinforces the case against *Guan's* optimism.

Much of this discussion concerns the idea of openness through access, and that being so it is important to turn to the other elements of access, namely satisfying the demand for higher education and the access of disadvantaged groups.

Satisfying demand

The self-study system was born out of a desire to satisfy the huge demand for higher education that was evident in the period immediately following the Cultural Revolution, although by the latter half of the 1980s policy had changed. The fact that there is no quota on 'admissions' and indeed no entrance examination or qualification was seen by *Guan* (1989, p.561) as part of the principle of openness. So in theory the self-study examination

system is able to satisfy that demand by not preventing anyone who wants to from entering the system. As with the other distance learning systems demand comes from adults and school leavers, and I will consider both of these groups.

The figures for those sitting examinations in Table 8.2 indicate that against this criterion of openness self-study is doing well. I want to look at the capacity to absorb students in the context of all the distance learning systems, adult higher education as a whole and conventional higher education to add to the partial picture presented in Chapter 4.

Table 8.10 shows the admission figures only for the RTVU and correspondence education (the figure in parenthesis is estimated assuming linear change, and that in square brackets is a calculation based on this estimate). These are the 'official' distance learning systems, and represent the figures for degree and diploma students only. Table 8.10 reflects the conclusion from Chapter 4 that correspondence education has taken over as the main form of 'official' distance learning caused by the decline of the RTVU.

Table 8.10: admission figures (thousands) for the 'official' distance learning systems compared with conventional and adult education 1983-1990

<i>Year</i>	<i>Conv. HE</i>	<i>Off. AE</i>	<i>RTVU</i>		<i>CEU</i>		<i>Total DL</i>	<i>DL as % of AE</i>
			<i>(No.)</i>	<i>(%)</i>	<i>(No.)</i>	<i>(%)</i>	<i>(No.)</i>	<i>(%)</i>
	<i>a</i>	<i>b</i>	<i>c</i>	<i>c/b</i>	<i>d</i>	<i>d/b</i>	<i>e</i>	<i>e/b</i>
1983	391	417	236	57	68	16	304	73
1984	475	474	206	43	93	20	299	63
1985	619	788	273	35	179	23	452	57
1986	572	564	215	38	113	20	328	58
1987	617	515	130	25	133	26	263	51
1988	670	698	192	27	195	28	387	55
1989	597	450	(140)	[31]	170	38	310	69
1990	610	492	93	19	153	31	246	50

Sources: Tables: 3.3, 4.1, & 7.8; Appendix 3 (and Figure 6.5).

But the self-study examination system changes this view, as Table 8.11 shows. This table gives the admissions data of the distance learning systems for selected years, including all

three systems and all students (e.g. including single- and all-course students in the RTVU)⁵² so that the self-study examination system can be included in a comparable way. From these data the total capacity of the systems is estimated. Table 8.11 shows that in terms of numbers the self-study examination system is by far the largest of the three.

Table 8.11: 'admission' figures (thousands) for all distance learning systems for selected years

<i>Year</i>	<i>RTVU</i>		<i>Corres.Ed</i>		<i>Self-Study</i>		<i>Total</i>
	(No.)	(%)	(No.)	(%)	(No.)	(%)	
1984	353	50	93	13	259	37	705
1988	431	11	195	5	3,296	84	3922
1989	(240)	[6]	170	4	(3,400)[89]		[3,810]
1990	(160)	[3]	153	3	4,600	94	[4,910]

Sources: Tables 8.2 & 8.10; Appendix 3.

Table 8.11 shows that the self-study examination system alone should in theory be able to absorb all those who were rejected by either the conventional or adult higher education entrance examination. Table 8.12 shows this by taking the 1990 figures to estimate the total that are turned away by both of the entrance examinations.

Table 8.12: estimates of the number (thousands) of school leavers and adults who would like to enter higher education

<i>School leavers</i>		<i>Adults</i>		<i>Total not entering</i>
Sit exam.	Fail to enter HE	Sit exam.	Fail to enter HE	
2,810	2,201	1,150	721	2,922

Sources: Tables 3.9 & 4.3

There is no evidence, however, that school leavers think of taking the self-study examination system route to higher education, with only one recent report of a small group of 100 students in Hebei.⁵³ The evidence from the trials in 1981-2 is slightly better particularly in Beijing where 12% were unemployed youth, and 45% between the ages of

17 and 25, having graduated from school during the Cultural Revolution. In the other trial areas there was a lower proportion, of the order of 5-6% being unemployed youth, and most being aged 20-35 years old.

The lack of openness in absorbing the unsatisfied demand must then be put down to one of image or of what people see as their chances of success. The latter I have already considered; the former is difficult to evaluate, but I will come back to it when I consider quality in the final section.

Access for disadvantaged groups

For those in rural areas there is little to prevent access, in that no particular facilities are required at least for study, nor entry qualifications, both of which are usually disadvantages for them. In the 1981-2 trials there was little evidence of rural people being involved, with Liaoning having 'peasants' as only 1.5% of those sitting examinations (*Zhongguo jiaoyu nianjian bianjibu*, 1984, p.626). Later reports are usually only of isolated examples of rural involvement, as for example in the rural suburbs of Shanghai (Gu, 1988, p.23-31), or in the example of the county in Hebei quoted earlier.⁵⁴ In Shanghai specialities have been offered that are specifically for rural areas, such as 'Village and township enterprise economic and financial management'.⁵⁵ The lack of any real access for rural people is reinforced by the statements of He Dongchang, Vice-minister, State Education Commission, where he said that self-study must address rural areas and village and township enterprise work.⁵⁶ This was echoed by the Vice-Chair of the national committee.⁵⁷ There is no obvious reason why there should be so few rural participants. No qualifications are required and no special facilities are necessary for study. It may be, however, that they do not see the content of the courses as relevant, or the qualification offered as a realistic goal.

Self-study does, however, reach disabled people. In reviewing special adult education in China, Zhang (1988) notes a number of examples of disabled students taking part in self-study, with an estimated 400 receiving certificates in 1981 and 1985. The only other report was in 1987 with over 50 disabled students being awarded certificates in 1986.⁵⁸

These are very low figures compared with the RTVU and correspondence education (see Chapter 6, footnote 95).

Open learning

The principle of flexibility over study pace allows students to choose to study a lot or a little, and to be able to take time out and stop study. This includes the possibility of repeating courses if it is important for a student's work that he or she has grasped the knowledge completely. (This relates to the fact that students study in their spare time, the third principle of the system.) Flexibility is therefore the only manifestation of *open learning*, and does not fit with the ideas of *structure* and *dialogue* applied in Chapters 6 and 7. These ideas can only be used where there is a unified learning system, whereas with self-study there are a variety of such systems, but none that relates to the unifying feature, the examination system. This variety has implications for how the system is viewed as a form of distance learning, which I will deal with at the end of the chapter.

Economic development

The contribution of the RTVU and correspondence education to economic development in terms of graduate output was considered in Chapter 4, but the self-study examination system was not included because official statistics for adult education did not include this system. It is therefore appropriate to look in this chapter at the contribution of the self-study examination system in the context of all of the distance education systems. This will be done in terms of total output of graduates, the level of qualification and the specialities, insofar as data will allow.

Total output of graduates

By taking the data on graduates from Table 8.4 and adding it to Table 4.8 a comparison can be made of the relative sizes of the distance learning systems (see Table 8.13 overleaf).

Table 8.13: graduations (thousands) from all sectors of higher education including the self-study examination system 1980-1990

<i>Year</i>	<i>Conventional</i>	<i>Total Adult</i>	<i>RTVU</i>	<i>CE</i>	<i>SS</i>	<i>Total DL</i>	
						<i>(No)</i>	<i>(% of AE)</i>
1980	147	104	0	15	0	15	14
1981	140	94	0	5	0	5	5
1982	457	227	92	51	0	143	63
1983	335	136	68	14	0	82	60
1984	287	164	17	43	0	60	36
1985	316	355	165	51	8	224	63
1986	308	453	249	54	3	306	67
1987	532	514	179	78	33	290	56
1988	553	853	275	165	99	539	63
1989	619	n.a.	94	n.a.	150	n.a.	n.a.
1990	614	586	81	117	100	298	51

Sources: Tables 4.8 & 8.4

This table confirms the conclusion from Table 4.8 that distance education took over as the major source of graduates in adult education, at a time when adult and conventional higher education were of comparable sizes (1988). However, the trend is not certain in the most recent figures. On the face of it the self-study examination system could be the largest source of graduates, if growth had continued as it did up until 1989. On the basis of these data it is possible to conclude that distance education is of crucial importance to the supply of graduates to the economy, and that the self-study examination system will provide a substantial proportion of them. More to the point is that most of these graduates are diploma students, as the next section shows.

Level of qualifications and specialities

Tables 4.9 & 4.10 showed how adult education was responsible for rectifying the bias of the conventional system towards degrees, rather than diplomas. Figures are only available

for the self-study examination system in 1988, and these indicate that the self-study system produces almost exclusively diploma graduates (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.106-9).

As noted at the beginning of this chapter the principle of flexibility not only applies to how to study but also what, and allows students to choose to study for diplomas (*zhuanke*).⁵⁹ Although in 1988 the output was almost exclusively of diploma graduates, the number of degrees awarded has risen sharply over the last two years (1990 & 1991).⁶⁰ When the self-study examination system data are added to those given in Table 4.10 then the overall proportion of diploma graduates entering the economy is only slightly improved (see Table 8.14).⁶¹ This means that, although the impact on the total picture is not large, the self-study examination system is responding to the needs of the economy in terms of the level of qualification. This is in addition to responding to demand as illustrated earlier.

Table 8.14: ratio of degree and diploma graduates for all adult education (including self-study examination system) and conventional education sectors

<i>Year</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1988</i>	<i>1990</i>
<i>Diploma CHE</i>	139	89	83	83	114	(111)	274	(301)
<i>Total AHE</i>	94	227	136	164	355	453	853	586
Diploma AHE (87)		(211)	(126)	(152)	(331)	421	798	(576)
<i>Total graduates</i>	234	684	471	451	671	761	1406	1200
Total diploma								
(No.)	226	300	209	235	445	532	1072	877
(%)	97	44	44	52	66	70	76	73

Sources: Tables 4.10 & 8.4.

I have already noted the lack of data on the breakdown of graduates by speciality. There are, however, more social science and humanity specialities available than those in science and technology, in line with the needs identified in Chapter 3, but this cannot be expressed in terms of numbers of graduates in the various specialities. The increasing

number of professional certificate courses is also an indication of a responsiveness to government policy to meet the needs of the economy.

This concern for economic development also manifests itself in a focus on matching the students' choice of speciality with their work. Because self-study allows free choice of speciality then this match can be made by the student.⁶² The advent of specialities that match the needs of particular ministries and others is an indication of the desire to suit the educational needs of the workplace to improve economic development.⁶³ But this flexibility of speciality is too crude, in that a speciality is defined either at a provincial or a national level, remote from the needs of particular employers or their workers. Unlike the RTVU there is no element of choice in courses to suit local needs. At best specialized courses are defined at a provincial level, or co-ordinated among several provinces. An example of where this leads to meeting local needs is in Beijing, where a tourist management speciality was set up.⁶⁴ Some work units want to set up specialities but the regulations forbid this in an effort to retain the unified nature of the examinations and hence a guarantee of quality (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, pp.344-6). However, it is recognized as a problem. All this is exacerbated by the lack of mobility of labour, as it is with the other distance learning systems, again a problem recognized by those in the self-study system. They have called for the reform of the personnel system, the wages system, and the allocation of work.⁶⁵

Cost effectiveness

In this sub-section I will consider the benefits to cost effectiveness from spare-time study, possible threats to cost effectiveness, and the costs to students of a reliance on spare-time study.

Through the principle of spare-time study it was hoped to avoid problems of releasing workers from production. But it is not as simple as this. Workers need time off to attend the examinations, and they are supposed to get this without loss of pay or bonuses (*Guan*, 1989, p.566). Although this is not laid down in the 1988 regulations, it does seem to be an accepted, if not universal, practice. Examples of such time off, and indeed 5-10 days off for preparation for the examinations, have been reported in Hebei and Fujian.⁶⁶ In the

Beijing survey of graduates used earlier 60% were given the day off to do the examination, and 42% had been given time off to prepare, without loss of pay or bonuses.⁵⁷ There are two possible consequences of this development. Firstly, employers may show their usual resistance to giving time off and prevent students studying, but there is no evidence of this. Indeed the sustained level of participation indicated in Table 8.2 belies this. Secondly this may affect both the costs and the cost effectiveness of the system that makes it so attractive to government (so attractive that they do not place restrictions on entry as they do with the other systems).

The mere fact that students have so little time off makes this the most cost effective of the three systems considered, because so little salary cost is involved (or loss of production). Not only that but there is minimal state investment in providing learning support.⁵⁸ Support comes from existing educational institutions (who thereby improve their cost effectiveness by using existing facilities), or from non-government organizations who therefore bear the costs. But three threats to cost effectiveness exist. The first is the reduction in the spare-time nature of study, that could be exacerbated by practical work,⁵⁹ and by the need to improve the link between theory and practice that He Dongchang saw was necessary. The second threat comes from the development of centres, such as the one in Beijing noted earlier. Any large-scale development of these will pose the same problems for cost effectiveness as they have in the RTVU. There is at the moment no evidence that this is taking place, and moves to try and combine the self-study examination system, the RTVU and correspondence education may prevent any large scale development of separate facilities. Similarly this combination may prevent any threat to fixed costs from the specific development of audio-visual media so lacking in the support system of the self-study examination system. The third threat to cost effectiveness comes from the high failure rate. The high percentage of failures and slow rates of graduation mean that the cost of a successful student increases (if success is measured as passing a course or getting a diploma).

But of course spare-time study means costs to students. The social costs of spare-time study are great, as I have already noted in earlier chapters. In addition, for this system students must also bear the financial costs of study. For the examinations themselves this

is marginal, five yuan for each course.⁷⁰ So for a diploma of 10-15 courses this would give a total of 50-75 yuan spread over a 3-5 year period. But there are other financial costs: costs of travel to the examination centre, no doubt bearing most heavily on rural students; costs of any material and tuition. These costs are likely to vary considerably among individual students. The survey of Beijing graduates put their costs at, on average, RMB 211.5 yuan for the whole of their study. This included examination fees, material and classes. By 1989, because of inflation it had gone up to RMB 302 yuan.⁷¹

So the focus on spare-time study, together with the fact that no new institutions are set up to provide student support, and that there are no substantial material costs (especially for audio-visual material), make this form of distance education cost effective. There are none of the fixed costs that the RTVU system has, although there are ones associated with the committee structure. But this cost effectiveness to the government puts costs on the students, not only the social and financial ones discussed above, but the high failure rate caused by the lack of specific support to students.

THE ROLE OF THE SELF-STUDY EXAMINATION SYSTEM

The main contribution of the self-study examination system to higher education is its role in satisfying demand. It does this through its open entry, allowing large numbers to participate in higher education. It also makes a positive and continuing contribution to the economy in terms of the total output of graduates, their level, and to a lesser extent the kinds of specialities they studied. Perhaps because of its cost effectiveness and lack of direct costs to the government, it is able to operate outside the usual controls of the state over admissions. This means that it has not experienced the drop in participation of the other distance learning systems. But the variability of the student support, and the lack of specific learning material, compared to the RTVU and correspondence education, means that this positive contribution and the benefits of cost effectiveness are marred by high failure.⁷² Moreover this failure compares unfavourably with the other two distance learning systems. The student support sub-system will have to develop to make it as successful as the RTVU and correspondence education.

But there remains a question about whether or not the self-study examination system is a distance learning system. This has implications for the future development of its student support sub-system. If it is not a distance learning system, but rather a regulatory system for the conventional adult education sector, then its development and role will be different. An alternative future is not as an independent system, but one linked to the RTVU and correspondence education. In this final section of the chapter I will therefore consider these three roles: as a distance learning system, as a regulatory system, and as a part of several linked distance learning systems.

The self-study examination system as a distance learning system

The first question must be to ask if the self-study system is indeed a distance learning system according to the criteria considered in Chapter 5. The focus upon self-study as a mode of learning, supported by a variety of other methods, shows a concern for learning that rejects conventional ideas. This self-study has an honorable tradition in China, as I showed in Chapter 2, based on ideas of self-improvement as well as those of learning and the political function of education. I have already shown that the RTVU has not altogether made the break with conventional ideas, and so the self-study examination system appears more in line with the ideas of distance learning than the RTVU. The system *starts* from the desire to aid the student in self-study, and the idea of the term 'society *assisted* learning' (*shehui ju xue*) to describe this aid, does not detract from the centrality of self-study. Of course the nature of the student support can be entirely conventional, but there are sufficient references to other media to discount any dominance of traditional face-to-face teaching methods.

But the lack of development of the media to support learning, in particular the mass media of television and radio, does move it away from prevailing views of distance learning. Correspondence education is no different in this regard, and it would be unlikely that this would in itself disqualify it from its inclusion within a definition of distance learning. The increasing use of media that is occurring, and desired by those in the system, will therefore be beneficial in moving it towards a recognizable form of distance learning.⁷³ The number of tutorial and examination centres is unlikely to reach the level of

development in the RTVU. They are therefore not likely to be a threat to the cost effectiveness of the system, nor to its characteristics as a distance learning system in terms of the mode of learning promoted.

It is worth going back to the Keegan (1980) definition of distance learning presented in Chapter 5. The two criteria within that definition that fit well are: that it is distinguished from private study (although because of an organizing *system* rather than an *institution*); and students study as individuals rather than as groups. It also fulfils the criterion of 'physical separation', except that it is difficult to identify clearly who the separation is between! Certainly it exists between those who draw up the examinations and syllabuses, and the student, one of the principles of the system discussed earlier. There may be 'two-way communication' between the student and the teacher, but that depends upon the support chosen by the student, if any. Two-way communication is not a feature of the system, at least at this stage of development, because of the lack of identification of the teacher-student relationship. The system uses some 'technical media', but as I argued above this is still developing. Similarly the 'production of materials' may become industrialized, but it is certainly not at the moment. If the system remains in its present form it may never be so, because it is not a single institution that can benefit from such a form of production. So all in all a rather mixed assessment against the criteria, but one favouring its identification as a form of distance learning.

The difficulty in classifying it according to the Keegan (1980) definition is partly because, as I noted, it is not an institution, but a system using a framework of regulation to bind it together. This also makes it difficult to apply the models of distance teaching institutions in Table 5.1. None of Neil's descriptions is entirely adequate, but the 'service institution' model comes nearest. However, among the descriptions of the models in Table 5.1 there are elements that are relevant to the self-study system. Three of the key words in these descriptions are worth highlighting to help to understand the self-study system, namely *control*, *co-operation*, and *facilitating*. In Table 8.15 (overleaf) I summarize the self-study system under each of these words to show how it relates to them. For *control* I list

what is controlled; for *co-operation* who, or what, organizations co-operate; and for *facilitating* who is, and what is, facilitated.

Table 8.15: elements of Neil's models (Table 5.1) matched against the self-study examination system

Control

Direct (through the self-study guidance and speciality committees - national and provincial)

- syllabuses
- assessment (outcomes)

Indirect (through national legislation)

- examination process and management
- teaching material

Co-operation

Within the formal system

- with universities to construct the syllabuses and examinations
- with educational authorities, at provincial level and below, to organize the examination process

Within the informal system (to support the learner)

- educational institutions and other organizations to provide tuition
- individuals, educational institutions, publishers and audio-visual providers to produce teaching material
- other distance learning organizations to provide a support system

Facilitating

Students

- to engage in a study programme
- to be supported in their learning

Local authorities

- to meet the educational needs of their population
- to meet the economic development needs of their area

Adult higher education

- to provide an operating framework and qualification structure
- to gain recognition for their work through links to a national/provincial system

Trying to put this together into an alternative model to those presented by Keegan (1990, p.120) is difficult. One possibility is that of a 'shell model', that is a 'shell' of legislation and operational practice that allows the control, co-operation and facilitation described above. Thus the system is held together, not by institutional links, but by this shell that provides the interdependent interactions that constitute its systemic nature. Whether or

not this shell is adequate to define it as a distance learning system, rather than as a regulatory system for the rest of adult education is a moot point.

The self-study examination system as a regulatory system

The self-study examination system could be looked upon in another way as part of higher education. The principle of 'quality' means that the national and provincial guidance committees draw heavily upon university staff and other experts, and, along with the involvement of universities in setting examinations, the conventional system thus provides the academic standard to ensure quality.⁷⁴ More recently the setting up of speciality groups and other examination groups working within the regulatory system are seen as a way of guaranteeing quality.⁷⁵ The interesting thing about this view is that the application of standards from the conventional sector through the regulations is that they are used to regulate adult education in general.⁷⁶ Thus in 207 adult higher education colleges most of the students recruited in the period 1983-5 were assessed by the self-study system, and some non-approved colleges also used the system.⁷⁷ This is part of the pressure for 'regularization' discussed in Chapter 4 (p.95). The control by the definition of specialities at a national or provincial level, through the respective speciality committees, precludes their definition by others (e.g. employers), even if they want to do it to make the courses fit their own needs. Thus what I described as a shell of regulation for a distance learning system has another significance, that of controlling a wide range of institutions in the adult education sector.

Links among the distance learning systems

My initial work on the self-study examination system revealed that there was a case for considering the relationship between the RTVU and the self-study system (McCormick, 1986, p.92). This was based on the idea that, firstly, RTVU teaching material may be of use to self-study students, especially as at the time (1984) this material (especially television) was publicly available. But secondly, it was based on the fact that the system might compete with the RTVU. As I have shown in Chapter 6, self-study students have not in the past formed a large part of the RTVU student body, and their admission was

discontinued. But now that the RTVU is moving away from full-time study as the norm, competition may be more relevant. However, this occurs against a changing view of the relationships of the distance learning systems within both central and local government, and I want to re-examine these relationships. This examination will provide the setting for the next chapter where I look at the three systems in one province.

The **use of teaching material** of one system by another is still a relevant interaction that I identified in 1986. Indeed the third national conference in 1991, which looked back at the ten years of the system's life, identified the need to unify material production for the RTVU, correspondence education and the self-study examination system.⁷⁸ The actual use of RTVU printed material by self-study examination system students is less reported, and does not seem to be in use any more than conventional texts.⁷⁹ This interaction has also extended to the support system at the level of county provision of adult education. For example, a group of twelve people in Heilongjiang Province set up a self-study group to sit for the RTVU and other adult education college examinations, meeting three evenings every week.⁸⁰ In Beijing graduates of the self-study examination system set up small groups of self-study students.⁸¹

But what seems to be lacking is any formal link between the **systems**. This link could occur over the *production* of material or the *operation* of the support system. Curiously an article quoting He Dongchang's speech to the third national conference on self-study, in which he said that there was a need for unified material production for the RTVU, correspondence education and self-study, was headlined "Self-study must develop superiority going down its own road" (*zikaoyao fahui youshi zou ziji de lu*).⁸² In fact He Dongchang made the point that, although the self-study system should continue to develop, there should at the same time be collaboration with the RTVU and correspondence education. As early as 1987 a Vice-minister (*fuzhuren*) of the State Education Commission, Chang Haibo, pointed out that Shanghai was preparing to combine television education, correspondence education, and the self-study system. He was speaking in Tianjin and urged the city authorities to follow this example.⁸³ Reports from Shanghai showed that the collaboration was quite complete. In the rural suburbs the RTVU county level branch schools were involved with offering the face-to-face tuition

for two self-study examination specialities aimed at such areas.⁸⁴ The conventional universities that set the examinations produced correspondence material and tutorial material. Self-study system students could then choose to study completely by self-study or use the correspondence education material and RTVU face-to-face.

Almost a year later, on the day the 1988 self-study regulations were reported, a *Zhongguo jiaoyu bao* editorial stressed the importance of the self-study system, but also the need to combine it with radio, television and correspondence education.⁸⁵ This was not just at the level of sharing use of materials, or of students making use of support systems, but at a strategic level. As the editorial put it "for the same speciality and different forms of education, under the single premise of quality standards, mutually recognize credits" (*tong yi zhuanke de butong jiaoyu xiangshi, zai zhiliang biao zhuan yi zhi de qianti xia, keyi kaolu xianghu chengren xuefen*). As I said earlier (note 73), the 1988 self-study regulations encouraged the use of television, radio, and correspondence education to support students. These regulations (paragraph 29) said that such forms "must accept the guidance of the higher education self-study examination system and the management of the educational administration department" (*yingdang jieshou gaodeng jiaoyu zixue kaoshi jigou de zhidao he jiaoyu xingzheng bumen de guanli*). Therein lies the conflict. As it was put to me by Professor Chen Wenxiang, Vice-chair of the Zhejiang Provincial Education Commission, an institution like the RTVU that is relatively new and unconventional, with more independence than other institutions, feels special and will not accept control.⁸⁶

It is this problem, facing a provincial education commission charged with co-ordinating educational provision, that I want to explore in the next chapter. The competition among the distance learning systems seems not to be over which can capture the student market, but over which can retain independence, in the face of the logic of co-operation and the increasing pressure from central and local government. As far as the central and local government is concerned the self-study examination system is not a complete distance education system, the syllabuses and examinations form the 'shell', and it is this shell that is under the control of the State Education Commission and its provincial counterparts. In

as much as the self-study examination system appears much more under the control of the local government (because there is not an organizational structure outside the PEC), it may be more amenable to co-ordination by the local government than the RTVU, or indeed correspondence education.

The fulfilment of the promise of the self-study examination system in my view lies more in its possible links with the other distance education systems than with its independent development. It may of course continue to act as a regulatory system, but if that is coupled with the teaching and learning (student support) sub-system of the other distance learning systems this may have a more radical impact upon the quality of the provision in adult education in general. In the next chapter I will examine the integration of the three systems looking at it from the point of view of a single province.

NOTES

1. ZGJYB, No.1019, 7 May 1991, p.1. Actually they seem to have had two goes at a tenth anniversary, as it was reported seven months earlier (ZGJYB, No.922, 27 October 1990, p.3)!
2. ZGJYB, No.521, 22 March 1988, p.1; ZGJYB, No.1019, 7 May 1991, p.1.
3. McCormick (1986) and Chambers (1984) being the only ones by western commentators, and Cheng (1988) the only Chinese author to write in English at any length.
4. I will base this latter section on my earlier account (McCormick, 1986), treating it as part of the thesis (and hence using some of its wording in the thesis), with suitable updating and elaboration.
5. *Gaodeng jiaoyu zixue kaoshi zhixing tiaoli* (Temporary regulations for higher education self-study examination), 3 March 1988 (reproduced in *Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, pp.7-15).
6. ZGJYB, No.1021, 11 May 1991, p.3.
7. I have based the account of the early development of the system on Guan (1989, pp.561-6) and *Zhongguo jiaoyu nianjian bianjibu* (1984, pp.622-7).
8. This report, "State Council approves and passes on to the Ministry of Education the report concerning the higher education self-study examination trial method" (*Guowuyuan pizhuan jiaoyubu guanyu gaodeng jiaoyu zixue kaoshi shixing banfa de baogao*), is reproduced in *Zhongguo jiaoyu nianjian bianjibu* (1984, pp.909-10).
9. I have used the term 'student', although this is not strictly correct as self-study people are not registered students, but candidates. In Chinese the terms 'person' (*ren*) or 'examination candidate' (*baokaoren*) or 'self-studier' (*zixuezhe*) are used rather than 'student' (*xuesheng*), but none of these is convenient in English.
10. Although the report of the trials in *Zhongguo jiaoyu nianjian bianjibu* (1984, pp.624-7) is quite clear about this, using the term *renci*, later statistics are rarely so careful.

11. Initial notification of this was given in: *GMRB*, 19 December 1982, p.1, and formal notification through *State Council Bulletin*, No.12, 10 July 1983, pp.533-35.
12. *State Council Bulletin*, No.12, 10 July 1983, pp.533-35.
13. *ZGJYB*, No.922, 27 October 1990, p.3. Fudan University in Shanghai also runs classes and is involved in examination setting (Li, 1986, p.44-6).
14. *ZGJYB*, No.922, 27 October 1990, p.3.
15. The *State Council Bulletin* (No.3, 31 March 1983, pp.100-102) laid down conditions for the treatment of graduates from the non-conventional sector. It also indicated the need for provinces to set examinations for them, and the self-study legislation formalizes this.
16. *ZGJYB*, No.1021, 11 May 1991, p.3.
17. *ZGJYB*, No.875, 10 July 1990, p.1.
18. *Jiaoyubu* (Ministry of Education), (83), No.001, 4 May 1983: *Guanyu chengli sheng, zizhi qu gaodeng jiaoyu zixue daoshi zhidao weiyuanhui, kaikao zhuan ye jiqi kaoshi jihua wenti de tongzhi* (Notice concerning the question of established Provincial and Autonomous Regions Higher Education Self-Study Examination Guidance Committee starting specialities and examination plans). Reproduced in *Gaodeng jiaoyu zixue kaoshi bangongshi* (1989, pp.18-9).
19. The statistics for adult education, as reported by the Planning Department of the State Education Commission (e.g. for 1980-85, published in 1986), do not include those for self-study. Apart from the 1988 statistical yearbook (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989) the only 'official' reporting seems to be in the results of five-year plans (e.g. the Sixth Five-year Plan: *ZGJYB*, No.325, 29 November 1986).
20. Apart from the 1990 figure for the number of people sitting examinations (which is lower than the number of courses being sat), and the 1989 figure for cumulative certificates awarded (which seems too low, cf 1986 figure). It could be that the figure for the number of *people* refers to those who registered rather than those who sat, in which case it is quite possible that this would be less than the number of *courses* actually sat. The reported number for the annual sittings is not entirely consistent with the latest cumulative figure (1991), but given the way reporting is done it is at least of the right order of magnitude.
21. *FBIS CPS*-86-020, 15 February 1986, pp.24-5.
22. *ZGJYB*, No.922, 27 October 1990, p.3.
23. In early 1987 it was claimed that professional certificates were one form of certification (*ZGJYB*, No.388, 9 May 1987, p.2), but a month later such a certificate was still to be developed (*ZGJYB*, No.409, 27 June 1987, p.3).
24. *ZGJYB*, No.564, 30 June 1988, p.2. This is not altogether compatible with the development timetable just discussed.
25. *RMRB*, 21 December 1985, p.3. Table 8.16 shows a limited set of cumulative data.

Table 8.16: secondary technical self-study system cumulative statistics (thousands) for selected years

<i>Year</i>	<i>1987</i>	<i>1988</i>	<i>1991</i>
No. of sittings	396	n.a.	n.a.
No. of certificates	217	400	500
Graduates	17.5	70	n.a.

Sources: 1987 - *ZGJYB*, No.446, 22 September 1987, p.1; 1988 - *ZGJYB*, No.521, 22 March 1988, p.1; 1991 - *ZGJYB*, No.1021, 11 May 1991, p.1.

26. Unless otherwise stated operational details are based upon an interview with Huang Fenggeng, of the Zhejiang Provincial Education Commission's office for self-study higher education.
27. They do not seem to be available in bookshops, even those specifically for higher education. I was kindly given the syllabuses analysed here by the Zhejiang Higher Education Self-study Examination Office.
28. *Shanghai shi gaojiao zixue kaoshi weiyuanhui bangongshi bian* (Shanghai Higher Education Self-study Examination Committee Office editors), 1983 nian (*xia bannian*) *Shanghai shi gaodeng jiaoyu zixue kaoshi shiti ji cankao da'an* (The 1983 (second half) Shanghai City Higher Education Self-study Examination Questions and Reference Solutions), Shanghai jiaotong daxue chubanshe, 1984.
29. *Guanyu bianxie gaodeng jiaoyu zixue kaoshi jiaocai de jidian yijian* (A few opinions concerning the editing of higher education self-study examination teaching materials), 10 May 1986. Reproduced in *Gaodeng jiaoyu zixue kaoshi bangongshi* (1989, pp.398-402).
30. 70,000 characters per credit, 350,000 for the equivalent of one semester full-time and 600,000 characters for a one-year course!
31. The national committee will write the foreword and the speciality committee the postscript.
32. *ZGJYB*, No.1021, 11 May 1991, p.3.
33. One such full-page advertisement was for Beijing University Publishing House books, eight of which were for the national self-study examination (*ZGJYB*, No.756, 28 September 1989, p.4). Another was run on four occasions over a three-month period at the end of 1988 by the Fujian Higher Education Self-study shop, and, although it mentioned the self-study examination as giving a recognized qualification, there was no indication that it was approved material (*ZGJYB*: No.612, 20 October 1988, p.4; No.619, 5 November 1988, p.3; No.635, 13 December 1988, p.4; No.646, 7 January 1989, p.4).
34. This monthly magazine was named *Rencai* (Talented People) for the first three issues, starting in January 1983, and published by the Workers Publishing House.
35. For example, *Zhejiang zixue kaoshi* (Zhejiang Self-study Examination), published by the provincial Higher Education Self-study Examination Office. Chongqing also produced a newspaper, *Zixue bao*, that initially was for local circulation, but hoped to become national (*SWB FE/7458/BII/11*, 7 October 1983).
36. For example, the Economic Management Magazine Education University (*Jingji guanli zazhi jiaoxue daxue*), run by the Industrial Research Institute of the Academy of Social Sciences, the Education Research Association of Enterprise and Industrial Management of China, and the editorial committee of the journal *Jingji guanli* (Economic Management) (*RMRB*, 20 July 1983, p.1).
37. *ZGJYB*, No.922, 27 October 1990, p.3.
38. *ZGJYB*, No.637, 17 December 1988, p.2.
39. *RMRB*, 8 December 1984, p.1.
40. *ZGJYB*, No.924, 1 November 1990, p.1.
41. *WHB*, 11 March 1982, p.2.
42. *XHRB*, 3 January 1982, p.1; 15 February 1982, p.1; 28 August 1982, p.4.
43. 11 June 1983, p.4.
44. *ZGJYB*, No.922, 27 October 1990, p.3.
45. *ibid.*

46. Interview with Mr. Huang Fenggeng of the Zhejiang Higher Education Self-study Examination Office, 9 May 1990.
47. However, using these national statistics broken down by province, the Zhejiang figures are higher (58% and 67%), and hence greater than the statistics associated with Table 8.3 (*Guojia jiaoyu weiyuanhui jihua jianshisi*, 1989, pp.106-9).
48. There were some exceptionally high figures of around 70%, but these were for a professional course in Pricing. This is a speciality for the National Commodity Pricing Bureau (*Guojia wujia ju*) to train cadres in government to implement new pricing methods, and laid down by the National Higher Education Self-study Examination Guidance Committee in 1986 (document reproduced in *Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, pp.229-31).
49. *ZGJYB*, No.922, 27 October 1990, p.3.
50. Interview with Mr Huang Fenggeng in Zhejiang (9 May 1990).
51. In the context of the Open University the 'open door' is seen by some as a 'revolving door' with students going into to it and being rejected back out after one revolution and in effect not actually entering the university properly. Harris (1987) presents a critique of the Open University in these terms.
52. The estimates of RTVU students are based on taking the 1989 ratio of single-course to all-course students (1.7) and applying it to the known figure for all-course students in 1990, and the estimated one for 1989. The latter estimation is based on assuming linear change.
53. This was for the self-study university mentioned earlier (*ZGJYB*, No.637, 17 December 1988, p.2).
54. *ZGJYB*, No.1021, 11 May 1991, p.3.
55. *ZGJYB*, No.388, 9 May 1987, p.2.
56. *ZGJYB*, No. 1021, 11 May 1991, p.3.
57. *ZGJYB*, No. 1019, 7 May 1991, p.1.
58. *ZGJYB*, No.337, 6 January 1987, p.2.
59. Those in the national self-study committee see this emphasis on diplomas as a good thing, and a positive reform that conventional higher education has yet to adopt (*ZGJYB*, No. 1021, 11 May 1991, p.3). However, Table 3.8 has shown that in recent years the ratio has improved in the conventional sector.
60. In 1990 there were 2,500 degrees (*benke*) awarded, and in 1991 3,785 (*ZGJYB*, No.875, 10 July 1990, p.1; *ZGJYB*, No.1021, 11 May 1991, p.3). However, another report said there were only 859 in the ten years of operation (*SWB FE/1071 B/9*, 14 May 1991).
61. This table assumes that all graduates of the self-study examination system have diplomas; the error involved (2%) will not affect the overall proportions.
62. It also allows a degree of choice over some of the optional courses within a speciality based on a credit system.
63. This covers both academic courses (foundation, diploma and degree) and professional certificates.
64. *ZGJYB*, No.801, 11 January 1990, p.2.
65. *ZGJYB*: No.409, 27 June 1987, p.3.
66. *ZGJYB*: No.337, 6 January 1987, p.2; No.954, 8 January 1991, p.1.

67. ZGJYB, No.922, 27 October, 1990, p.3.
68. A point made in the interview in Zhejiang (9 May 1990).
69. No one seems to discuss the time needed for graduation projects and theses, though they are a part of the self-study examination system.
70. Made up of 2 yuan for registering and 3 yuan for doing the examination. This was laid down by regulations from the Ministry of Education, the Pricing Bureau, and Economics Ministry in early 1988 (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, pp.377-81), along with the payments to all those involved in providing various services. The figure of RMB 5 yuan was still applied in 1990 (interview in Hangzhou, 9 May 1990).
71. ZGJYB, No.922, 27 October, 1990, p.3. Mr. Huang Fenggeng, in Hangzhou, gave a figure of RMB 30-50 yuan for tuition, but he was unspecific about whether this was for one course or for a speciality.
72. However, the different interpretations of success must be borne in mind, because failure to sit an examination or failing it have many explanations.
73. The 1988 regulations have a section on 'society assisted learning' that encourages the development of television, radio and correspondence education (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, pp.12-3).
74. Two examples from Beijing show how universities are involved and explain their role in assembling the expertise to guarantee quality of standards (ZGJYB, No.922, 27 October 1990, p.3).
75. ZGJYB, No.1021, 11 May 1991, p.3.
76. This was one of the functions of the local self-study committees (see p.265).
77. ZGJYB, No.1021, 11 May 1991, p.3. This would represent about 20% of such institutions (see Table 4.1).
78. ZGJYB, No.1019, 7 May 1991, p.1.
79. I have found only one reference to a RTVU text in the teaching plans of specialities (*Gaodeng jiaoyu zixue kaoshi bangongshi*, 1989, p.133).
80. RMRB, 23 October, 1984, p.1.
81. ZGJYB, No.922, 27 October 1990, p.3.
82. ZGJYB, No.1021, 11 May 1991, p.3. To be fair to the newspaper's editors He Dongchang did also say that.
83. ZGJYB, No.359, 3 March 1987, p.1.
84. ZGJYB, No.388, 9 May 1987, p.2.
85. ZGJYB, No.521, 22 March 1988, p.1.
86. Interview 14 May 1990.

CHAPTER 9 DISTANCE LEARNING IN ONE PROVINCE

INTRODUCTION

This thesis has demonstrated the important relationship between the development and role of distance learning systems and the context. There are a variety of levels at which this context can be considered. The thesis as a whole looks at the national context. Different areas within China have different needs and conditions for the implementation of distance learning. Thus the difference between Jiangsu and Zhejiang in the PRTVUs' intake of school leavers is because of differing economic support to the payment of fees of the respective provincial governments.¹ Similarly programmes such as the Television Teachers' College have differing success in different provinces depending upon the existing teacher training provision in a province. Linked with this, general economic conditions mean that rich provinces with good educational provision have different needs and ambitions for distance learning than poor ones, who might for example be more committed to individual systems. It is important therefore to take a single province as a case study of distance learning at this level. The existence of a provincial education commission charged with co-ordinating provision throughout the province, makes this an important level to consider the issue of integration of the distance learning systems. This is the issue with which I ended Chapter 8, where I noted the isolation of the self-study system in the face of evident need, and indeed initiatives, for collaboration. I will argue that, in the longer term it may be that it is at the provincial level, rather than at the national level, that integration efforts will be most effective.

This chapter will focus on Zhejiang Province and first consider some general aspects of the province, including an overview of adult education. It will then move on to look at some of the special features of the various forms of distance learning. Having set the scene of the context I will then explore the issue of integration including some of the institutions that show potential for aiding integration. In particular I will look at Hangzhou University, and the Audio-Visual Centre (which is parallel to the national one mentioned in Chapter 5). Integration can be brought about in two ways: through measures

taken by central government ('top-down'), and by local efforts ('bottom-up'). I shall explore these approaches towards the end of the chapter, after examining the advantages and disadvantages of integration. Finally, I will discuss the prospects for integration.

THE PROVINCE OF ZHEJIANG

Geographical and economic conditions

Zhejiang is a coastal province just below the divide of the *Changjiang* (Yangse) river. The popular vision of this province may be the beautiful West Lake in Hangzhou, but this reflects only the northern alluvial plain. Seventy per cent of the 103,000 square metres of the province is mountainous, with peaks reaching 1000 metres. Although the agriculture is limited by the geography, Zhejiang still has the second most productive output of rice per hectare, and also produces soya beans. The province's industrial output has a larger proportion of national output than agriculture, being mainly food and textiles. Hangzhou, the provincial capital is a centre of tourism, foreign and Chinese. It accounts for one million of the forty-two million inhabitants of the province, but for a third of the central government's expenditure. For this reason the provincial government has resisted attempts by the municipal government of Hangzhou to seek separate status, and this desire for independence is evident even in the distance learning systems, as I will show later.

Educational conditions

In keeping with its position as a relatively prosperous coastal province Zhejiang has a well developed conventional education system. The nine-year compulsory education programme is complete in urban areas, and throughout the province primary schools take 98.86% of school-aged children (1988), with attendance and graduation figures of 99.35% and 97.59% respectively (1987).² As elsewhere in China the tasks for adult education are seen as upgrading educational levels to match the development of society, and within this to supply the trained labour for economic development. There are a variety of forms of adult education in addition to distance learning provision, administered through the various departments of the Provincial Education Commission.

The administrative structures of education

The major departments of the Commission, Teacher Education, Higher Education, Adult Education and the Self-study Examination Office, are responsible for the various strands of distance education, as shown in Figure 9.1. Correspondence education for teachers consists of higher education for secondary school teachers and senior secondary level for primary school teachers. The Adult Education Department is responsible for television secondary education, Staff and Workers' Universities, the RTVU and conventional forms of secondary and rural education (for those who did not get it at school age). At present the departments run the various elements of distance education to reflect their existing control of either the institutions that offer it (e.g. conventional universities and correspondence education) or their concern for the target audience (e.g. teacher education). Correspondence education and evening universities run by conventional universities will be moved from the Higher Education Department to Adult Education to reflect the target audience.

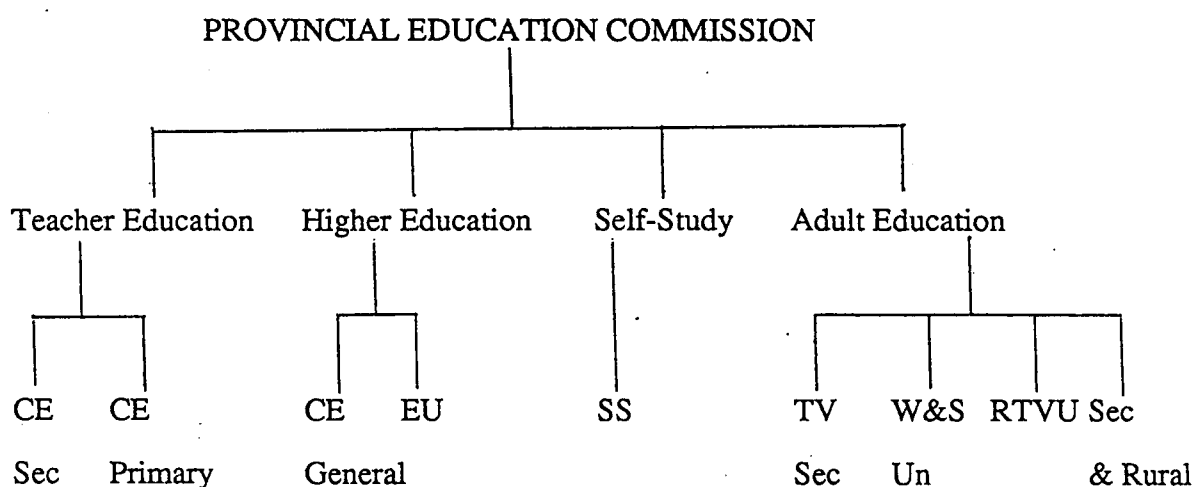


Figure 9.1: the administrative structure for distance education in Zhejiang Province

An overview of adult higher education

The adult education sector is large but it has been falling both in terms of its absolute size and relative to conventional higher education, as Table 9.1 shows. Enrolments have dropped as a proportion of those in conventional universities from 75% to under 60% in 1988. When asked about the drop in numbers being caused by the introduction of the unified adult higher education entrance examination, the Deputy Director of Adult Education, Mr Quan Weigang, gave three reasons in addition to this one:

- a the contract system making employers reluctant to release workers for study because of effect on production;
- b the pressure on employers from graduates wanting promotion again making them reluctant to support students in higher education;
- c government policy to reduce the numbers in higher education.

However, the simultaneous rise in conventional higher education undermines the last explanation.

Table 9.1: adult and conventional higher education statistics (thousands) for Zhejiang Province 1985-90

<i>Year</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>
Adult						
Admissions	15.9	14.3	11.1	13.5	10.5	n.a.
Enrolment	39.8	40.9	36.7	36.1	n.a.	n.a.
Graduates	9.7	n.a.	n.a.	9.3 ^a	n.a.	n.a.
Conventional						
Admissions	19.0	17.9	18.2	19.4	n.a.	n.a.
Enrolment	52.7	57.4	60.1	60.4	n.a.	n.a.
Graduates	11.0	13.0	15.0	18.7	n.a.	n.a.

Sources: 1985 - SWB FE 23 April 1986; 1986 - Zhejiang PEC (1990 visit), SWB FE 1 April 1987; 1987 - Zhejiang PEC (1990 visit), Zhejiang PEC (1988 leaflet), FBIS CAR-88-021, p.41, 29 April 1988; 1988 - Zhejiang PEC (1990 visit), SWB FE/W0080/C/7-12, 7 June 1989; 1989 - Zhejiang PEC (1990 visit).

THE DISTANCE LEARNING SYSTEMS

In addition to dealing with the three major systems of the RTVU, correspondence education, and the self-study examination system, I will also consider briefly the Television Teachers' College. My purpose will be to consider any special features of these systems within Zhejiang, as well as to consider their relative sizes.⁴

The PRTVU

Chapter 6 has already made reference to some aspects of this PRTVU, and here an overall picture will be presented. Like many of the PRTVUs Zhejiang was established in 1979, but was not among the key PRTVUs identified by the World Bank Project. It is about a third of the size of a key PRTVU such as Jiangsu, although it had a higher proportion of diploma graduates, especially in 1989, than its staff size would indicate, as Table 9.2 shows.

Table 9.2: a comparison of Zhejiang and Jiangsu PRTVUs

	Zhejiang	Jiangsu
Diplomas		
Cumulative graduates (1979-88)	46,870	75,974
1988 total graduates	11,743	18,491
1989 full-time graduates	10,261	5,321
1989 part-time graduates	12,440	4,546
Inservice etc.	11,062	36,962
Staff (1988)^s		
Total	1,362	3,731
Teaching	655	1,863
Organization		
MRTVU	1	11
BS	12	46
WS	77	76

Source: *Xie & Li* (1990, pp.320 & 374); 1989 graduates Hawkrigde (1990, Tables 5.1E & 5.1F).

Table 9.3 (overleaf) gives a more complete set of statistics, based upon the same source as those given for the complete RTVU system (Appendix 3). However, these statistics are not easy to interpret. Figures obtained in May 1990, covering the period 1979-89 (Table 9.4, p.309), show similar values to those in Table 9.3 in terms of total admissions or graduations for diploma study, but the breakdown in terms of diploma (all course) and single courses does not match.⁶ The 'free viewers' do not register, but simply take the examination.⁷ The proportion of these two groups in subsequent years was not given.

I have already made the point that Zhejiang PRTVU had a tradition of a large number of 'free viewers' and that it retained them long after the State Education Commission had asked for their admission to be stopped.

Whatever the detailed breakdown of students between full-time, part-time and spare-time (registered or not) diploma students, two trends are evident. First, in the last few years (1989-90) there has been a drop-off in admissions to conventional diploma study of both full-time and self-study students, although this latter figure has been very volatile over the life of the PRTVU. This decline matches the general trend in the RTVU. Second, self-study students are the mainstay of the student body, and since 1985 they have even represented a significant proportion of graduates, exceeding full-time students in 1988. In 1989, when 'self-study' students were becoming the norm in the RTVU as a whole, Zhejiang had 77.5% of its 58,200 enrolment as self-study (Zhejiang PRTVU, 1989a, p.3).⁸ This percentage explains the lack of full-time students visible in places like Xiaoshan, that I reported in Chapter 6. The trends evident in the RTVU system as a whole, as shown in Figures 6.4-6.7 (Chapter 6), are similar in Zhejiang PRTVU, except that the total admissions for diplomas in 1988 bounced back much more than in the rest of the system. This was almost entirely because of the self-study students. It may be then that Zhejiang's stubborn refusal to give up its self-study students was a strategy to counter the decline in students, particularly in the face of competition from the self-study examination system.

Table 9.4: admissions and graduations for Zhejiang PRTVU 1979-90

Year	Admissions				Graduates			
	All course	Single Course	Free Viewers	Total S-S	TOTAL	All course	Self-study	TOTAL
1979	3201	2651	8336	10987	14188	-	-	-
1980	2036	1857	5389	7246	9309	-	-	-
1981	0	0	0	0	0	-	-	-
1982	6043	10694	3533	14227	20270	2752	37	2789
1983	9702	n.a.	n.a.	13627	23329	1754	171	1925
1984	6848	n.a.	n.a.	2565	9413	0	0	0
1985	5252	n.a.	n.a.	35659	40911	4987	2971	7958
1986	7895	n.a.	n.a.	3441	11336	9561	5135	14696
1987	3809	n.a.	n.a.	5797	9606	5067	3572	8639
1988	3942	n.a.	n.a.	26736	30678	5836	13345	19181
1989	1856	n.a.	n.a.	17049	18905	4067	3476	7543
1990	1903	n.a.	n.a.	14835	16738	n.a.	n.a.	n.a.

Source: data provided on visit to Zhejiang PRTVU (May 1990).

Table 9.4: enrolments for Zhejiang PRTVU 1983-9

Year	Enrolment		
	Full-time	Single course	Free-viewers
1983	15490	n.a.	22596
1984	21530	n.a.	26095
1985	20640	n.a.	51851
1986	18009	n.a.	32118
1987	15385	7644	35000
1988	n.a.	n.a.	n.a.
1989	13095	n.a.	45105

Sources: 1983-87 - Zhejiang PRTVU (1988)[leaflet]; 1989 - Zhejiang PRTVU (visit May 1990).

The trends in the non-diploma courses (Table 9.3) and secondary vocational courses show some differences to those in the rest of the system (*cf* Figures 6.8 & 6.9). The 'continuing education' courses seem to have had a shorter period of success than the rest of the system, with the first year (1987) being followed by a slump. Similarly inservice courses have tailed off whereas they have increased elsewhere. On the other hand, although Zhejiang PRTVU started secondary vocational courses a year later than the rest of the system, the growth in 1988 has been much more spectacular than in the system as a whole.

Zhejiang PRTVU has five faculties covering science, engineering, Chinese, law, and economics, with 70 specialities (Zhejiang PRTVU, 1989b, p.2), although only 24 were on offer in 1988 (Xie & Li, 1990, p.375). More than half of these seem to be locally produced courses, and all of these local courses are in economics and management specialities. Interestingly Hangzhou Municipal RTVU (MRTVU) ran its own 'machine electrics' (*jidian*) speciality from 1979-84, which is offered only to the branch schools and associated workstations within its jurisdiction. There were no graduates of this speciality recorded, indicating that it was either a single-course subject or an inservice course. Of relevance to teacher education, and considered in the next section, is the fact that in the province as a whole very few teachers took the science courses offered for teachers in 1982. Only one person took physics in 1980, and 53 in 1982 when it was nationally offered (two did it by self-study). Similarly 56 did chemistry in 1982. These small numbers on courses pose a threat to the cost effectiveness of the system and seem to indicate a view that it is quite possible to run a distance learning system at a similar level of activity to that of a conventional institution.

The structure of Zhejiang PRTVU reflects the relative lack of large cities with MRTVUs, and counties with branch schools, compared to Jiangsu. But it has more workstations, and the combination of branch schools and workstations is still larger in number than for Jiangsu. The World Bank Project provided money to equip four branch schools for audio-visual recording (off-air) and multiple copying, as well as television studio production facilities in the PRTVU (Zhejiang PRTVU, 1989a, pp.1-2). The studio production

facilities, although not up to the professional standards of say Jiangsu, have resulted in 707 hours of television programmes for: CRTVU courses (including those as part of the inter-PRTVU collaboration discussed in Chapter 6); local tutorial support for diploma courses; the secondary vocational courses. Hangzhou MRTVU, which has a separate campus, also has television studio production capacity and has made tutorial programmes. Both the PRTVU and the MRTVU have recording facilities to take programmes off-air for copying and distributing video-cassettes to workstations. Xiaoshan branch school, within the Hangzhou area, also has such copying facilities.

This brief account of Zhejiang PRTVU illustrates the general point about the importance of looking at the local context. The differences between Zhejiang PRTVU and national trends in both diploma and non-diploma programmes, the emphasis on self-study students, and the poor take-up of teacher education can be accounted for by the particular provincial education policies, policies pursued by the PRTVU, and the existing provision of adult higher education. The lesson from this is the importance of seeing the RTVU as the aggregation of these varying contexts to give the total national picture. Although national government policy has a general influence on the development of the RTVU, through both the RTVU system and provincial government policy, the national figures mask many different local situations. This account also indicates the threats to cost effectiveness through both low numbers and the duplication of resources.

Correspondence education

Teacher education

This area is one where the local context of teacher education is important, both in relation to the nature of the training task and the available provision. Naturally the Teacher Education Department of the PEC looks at the total provision, of which correspondence education is only one part. Indeed it is only one of the relevant distance learning systems, with the Television Teachers' College being a recent addition.⁹ My concern in this section is only with the training of secondary school teachers, as this corresponds to a higher education level, although primary school teachers have a very much bigger correspondence education programme aimed at a secondary educational level. Because of

the importance of the context I will have to discuss the broader area of teacher education of which correspondence education is only a part.

The nature of the training task for secondary school teachers is two-fold: to bring up to a qualified level (in academic subjects) the existing 22,000 under-qualified young teachers; to provide inservice education to the total 72,000 teaching force. Eliminating under-qualification is a target for ensuring nine years of compulsory education by the year 2000, and within this it is at secondary level that Zhejiang needs to focus. Training the under-qualified by conventional means, with a college capacity of 2,000 a year, would take 10-11 years. In addition there are a variety of states of under-qualification, and levels of potential achievement. Some teachers will be able to pass the adult higher education entrance examination and take a full-time or spare-time course in a conventional college, or use correspondence education. Others may be able to pass in some subjects and they can combine work on these with their work experience to obtain a teachers' 'professional qualification certificate', similar to the general certificates discussed in Chapter 4. I have no details as to how these teachers can get their training, although as I discussed in Chapter 7 such professional certificates can be studied using correspondence education. A third group are those who are unable to pass any subjects in the entrance examination. Ironically they get the least established support, using self-study (including the self-study examination system) and the Television Teachers' College's programmes. The Teacher Education Department is responsible for organizing the support and examinations associated with this form of training.

With Zhejiang anxious to live up to its reputation for having an advanced educational system it wants to reach the training targets laid down before the year 2000. So a variety of means is necessary, including the satellite Television Teachers' College. However, the economics of installing receiving equipment would not justify the scale of the upgrading task. But if a long-term view is taken then its role in inservice will make it a viable option. The fact is that Zhejiang is making almost no formal use of the satellite programmes. It was tried in Ningbo, Zhejiang's second city, and initially it worked well with primary school teachers. In 1987-88 the audience reduced. This was partly because

of practical reasons, such as inconvenient day-time broadcasts by local networks and reception problems in mountainous areas. These areas did not have satellite reception equipment and relied on re-transmission, some of which stopped altogether because of the reluctance of local stations to carry educational programmes. But with junior secondary school teachers the initial lack of an academic qualification meant that it was unpopular. The new academic subject programmes may help to increase use, but the Teacher Education Department have not yet finished preparations for providing access to television programmes and supporting study.

Within this context correspondence education has only a partial role. In fact it is a popular form of training with teachers because they do not lose any years of service while away studying (as for full-time study), and they have sufficient holidays to allow them to fulfil the attendance requirements discussed in Chapter 7. For this reason correspondence education for teachers has not suffered a fall-off in applications as has been the case for general higher correspondence education provided by conventional universities.

Unfortunately I have no specific correspondence education statistics to test this claim, but what there is does support it to some extent. Table 9.5 (overleaf) gives the statistics for secondary school teacher education of all forms. The last column, that includes both spare-time and correspondence education has been rising, and given the comments from the Teachers' Education Department about the popularity of correspondence education, it may be that the increase is mainly in correspondence education. Certainly full-time training is falling in popularity as the Department indicated. The size of correspondence education is difficult to estimate but clearly it will not be greater than the total spare-time enrolment of 5,234 in 1989.

The large network of teachers colleges (6) and training schools (39) means that they can provide support for correspondence education (Zhejiang PEC, 1988). The fact that teachers can go to a college for face-to-face tuition in the school holidays reduces the need for more local support. The training schools can of course provide a more local network, but they usually deal with primary school teachers, of which there were 12,768 doing correspondence education in 1987.

For the Teacher Education Department this array of provision, including several distance education systems, makes it difficult to integrate. Each system has its own goals and plans, as well as differing teaching plans, although the defining of the teachers' professional certificate may help in this non-diploma area.

Table 9.5: Zhejiang Province secondary school teacher education statistics 1987-1989

<i>Year¹⁰</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>
Admissions	1,551	3,013	2,531
Enrolment			
F-t	689	1,170	1,144
Sp-t	3,236	4,072	5,234
(including CE)			
<i>Total</i>	3,925	5,242	6,378
Graduates	1,375	1,617	1,133

Source: provided by Zhejiang Teacher Education Department (May 1990)

General higher education

The PEC, through its Higher Education Department, is responsible for the long term planning of this sector, as well as approving annual plans (of student admissions) and new specialities. Although the Department checks quality, there is no indication this involves inspection visits, as opposed to a more general concern for quality. Individual universities and colleges are responsible for the administration of correspondence education, with a special department of correspondence education or adult education registering and administering students, and the normal academic departments carrying out the planning for, and teaching of, students. I will return to some of the mechanics of this later when dealing with Hangzhou University.

General correspondence education is run by eleven higher education institutions, and they offer a total of fifty specialities. Table 9.6 (overleaf) shows the institutions offering correspondence education and their enrolment over the years 1982-89. None of these

institutions are teacher training ones, reinforcing the strict division of the two sectors of correspondence education, that reflects the responsibilities within the PEC.

Table 9.6: Zhejiang correspondence education enrolments 1982-89

<i>Institution</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>89</i>
Zhejiang University						264	426	877
HZ Electronic Engineering Institute			430	2087	2308	2352	1794	988
HZ Commercial Institute				978	978	1281	621	710
China Metrology Institute				136	514	755	263	825
Hangzhou University			729	1345	1465	1416	1145	980
ZJ Economic & Finance Institute								346
ZJ Agriculture University			353	540	613	354	409	555
ZJ Politics & Law College								31
ZJ Engineering Institute						76	322	596
ZJ Forestry Institute						63	-	119
<u>ZJ Inst. of Chinese Med.</u>	<u>248</u>	<u>248</u>	<u>241</u>	<u>333</u>	<u>92</u>	<u>195</u>	<u>193</u>	<u>199</u>
TOTAL	248	248	1753	5419	5970	6756	5173	6220

Source: provided by Zhejiang Higher Education Department

The peak year for correspondence education was 1987 and enrolment may now be falling, although the trend is unclear. The reasons given for a decline are similar to those given for adult education in general, but in addition workers are reluctant to do correspondence education because of the financial loss in taking time off work to do the face-to-face elements. This indicates that employers are not giving workers time off with pay, and contrasts with the situation of teachers who get the time off and whose recruitment to correspondence education is not declining. The fact that the economy had improved in the 1980s exacerbated this problem because the potential loss of earnings became larger. However, the fall in numbers is less when compared with that in the Staff and Workers' Universities, according to staff in the Higher Education Department of the PEC.

The main conclusions of this consideration of correspondence education in Zhejiang are that there is a good network of teacher training, but a lack of co-ordination with the general education sector at the level of the PEC. Also the release for study is an important factor in determining the popularity of correspondence education.

The self-study examination

This system started in 1984 in Zhejiang initially with ten specialities and by 1989 the number had risen to fourteen. All three levels of study are evident, namely foundation, diploma and degree. Courses that make up the specialities are drawn from those examined nationally, those by Zhejiang Province, and those based on co-operation across the provinces of east China.¹¹ In addition to these academic qualifications there are also professional certificate courses. For example, one for statisticians was agreed nationally by the National Guidance Committee and the National Statistics Bureau, and at local level by the corresponding provincial committee and bureau. By 1988 14,000 had already been awarded the certificate.¹² However, it is the academic qualifications that constitute the bulk of the system's work. Table 9.7 (overleaf) gives some of the figures for the years 1985-89. These are reported in two ways: based on the number of people participating, and based on the number of 'people-courses'.

As with correspondence education there seems to have been a decline since about 1987, although the trend is not uniform across all the statistics. The total number of specialities and hence courses has grown greatly (see Table 9.8 overleaf). This should have the same effect as observed in the RTVU, that is, it reduces the number of people per course, but there are insufficient data to test this.¹³

Table 9.7: participation (thousands) for Zhejiang higher education self-study examination system 1985-9

<i>Year</i>	<i>1985</i>	<i>1986</i>		<i>1987</i>	<i>1988</i>		<i>89</i>
<i>Examination</i>							
<i>sitting no.</i>	3	4	5	6	9	8	10
<i>No. registered</i>							
(people)	n.a.	52	64	67	68	53	51
<i>No. sitting</i>							
(people)	n.a.	n.a.	n.a.	n.a.	45	34	34
people-courses	60	77	n.a.	n.a.	n.a.	n.a.	n.a.
<i>Certificates</i>							
people	n.a.	n.a.	n.a.	n.a.	26	23	21
people-courses	35	40	n.a.	34	n.a.	35	32

Sources: 1985 - ZJZXKS, No.1, 1986, p.1; 1986 - ZJZXKS, No.4, 1986, p.2, ZJZXKS, No.6, 1986, p.47; 1987 - ZJZXKS, No.4, 1987, p.2; 1988 - Zhejiang PEC (visit 1990), see also *Guojia jiaoyu weiyuanhui jihua jianshisi*, (1989, pp.106-9); 1989 - ZJZXKS, No.4, 1989, p.6.

Table 9.8: the growth in the number of specialities and courses in the Zhejiang higher education self-study examination system

<i>Year</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	
<i>Exam sitting</i>	3	4	6	8	9	10
No. specialities	8	n.a.	10	11	14	14
No. courses	13	18	42	n.a.	65	70

Sources as per Table 9.7

As with the national figures it is useful to look at the graduation results, even although they do not constitute the only measure of success. The first graduates came in 1984, but were not reported; hence I have also used cumulative figures in Table 9.9 (overleaf) to enable the calculation of annual figures for years not reported. There has been a steady though modest growth in the number of graduates, all of whom were awarded a diploma

(*zhuanke*). The number of degrees (*benke*) awarded is very small with the first 20 in 1989, and another 30 in 1990.¹⁴

Table 9.9: number of diploma graduates from Zhejiang higher education self-study examination system 1986-90

<i>Year</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>
Graduates					
annual	480	1389	2706	3295	5244
cumulative	480	2869	5574	7357	12600

Sources: 1986 - calculated from 1987 figures; 1987 - *ZJZXKS*, No.4, 1988, p.6 & *ZJZXKS*, No.6, 1988, p.2; 1988 - *ZJZXKS*, No.4, 1988, p.6; 1989 - *ZJZXKS*, No.2, 1989, p.18 & Zhejiang PEC (visit 1990); 1990 - Zhejiang PEC (visit 1990).

If the number of graduates continues at the rate in 1990 then they will be equivalent to about a third of the conventional university output (*cf* Table 9.1). Such comparisons are made by those in the self-study system, but they have used participation rates in self-study compared to enrolment in conventional universities. On this figure they have actually exceeded the 1987 figure of 60,400 students in conventional universities, but only in the first session of 1988. Further figures for 1990 and 1991 would be needed to see if there has been a decline that matches that in other sectors. Of course this system is not subject to government policy, so changes reflect individuals' assessment of the advantages of the qualifications offered through self-study.

Like the other distance learning systems it appears that self-study is city based. Data from both graduates and participation (actually those registering for the examination) indicate this, as Table 9.10 (overleaf) shows, when matched against the locations in Figure 9.2. Only in one case (Taizhou Prefecture) are the figures in Table 9.10 for a whole area rather than a city, although of course rural people can travel into the city to sit the examination. There are examples of county-level activity in Zhejiang, so it may be that this bias is a feature of the reporting method. However, details of the second cohort of graduates, an admittedly small group, indicate that there is a bias against rural participation (see Table 9.11, p.320).

Table 9.10: the distribution of 1986 participants and 1989 (first half) graduates of Zhejiang higher education self-study examination

Map reference	Location	Participation		Graduates	
		No.	%	No.	%
1	Hangzhou City	17726	27	551	31
2	Ningbo City	9691	15	246	14
4-3	Huzhou City	3573	5	64	4
4-2	Jiangxing City	4960	8	145	8
5-1	Zhoushan City	2508	4	180	10
7-1	Shaoxing City	5034	8	144	8
?	Juzhou City	4217	6	115	6
8	Taizhou Prefecture	4606	7	420	24
9	Wenzhou City	3036	5	80	4
10-1	Lishui City	3641	6	81	4
11-1	Jianhua City	5561	9	153	8
Totals		64553		1782	

Sources: 1986 - ZJZXKS, No.6, 1986, p.47; 1989 - ZJZXKS, No.2, p.18.

Key: numbers refer to the prefecture and city in Figure 9.2 (e.g 4-2 is prefecture 4 and within it city 2); the black dot is the seat of prefecture government and indicates city where no separate city reference is given.

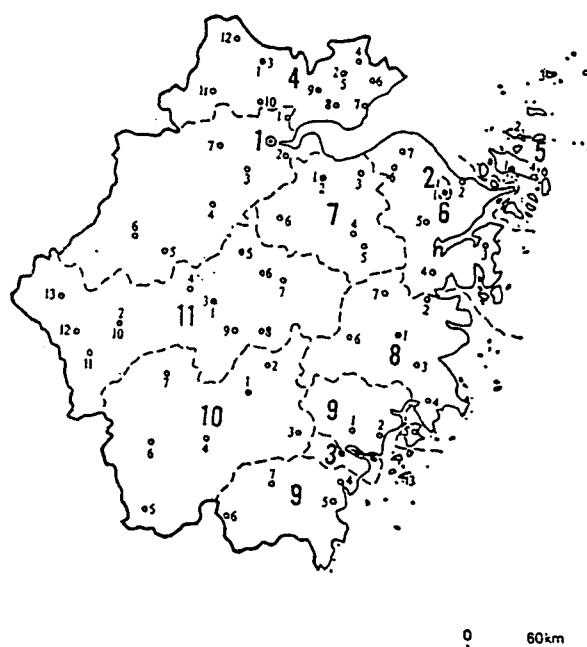


Figure 9.2: Zhejiang Province administrative districts

Table 9.11: occupations of the 1987 graduates of Zhejiang higher education self-study examination system

Cadre	Teacher	Worker	Peasant	PLA	Others
622	68	163	1	94	79

Source: ZJZXKS, No.4, 1988, p.6

The types of people who sit the examinations naturally reflect the specialities and courses on offer and Table 9.12 shows the subjects for the second and third cohorts of graduates. Not suprisingly the foundation and professional courses are popular, with conventional university subjects being less so; perhaps because they are more difficult, given the general comments made in Chapter 8.

Table 9.12: graduates by speciality for the Zhejiang higher education self-study examination system 1987-1989

<i>Speciality</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>
Party Administration for Cadres*	531	609	498
Chinese	340	626	205
Commercial Enterprise Management	146	145	84
Mathematics	7	18	5
English	6	8	10
Law	-	210	97
Statistics	-	974	703
Accountancy*	-	116	180
Totals	1030 ¹⁵	2706	1782

Sources: 1987 - ZJZXKS, No.4, 1988, p.6; 1988 - ZJZXKS, No.6, 1988, p.2; 1989 - ZJZXKS, No.2, 1989, p.18.

Key: * indicates a foundation speciality, the rest being diplomas.

There is no detailed information about the kinds of institutions offering support to students except from some of the results indicating that adult education institutions are using the self-study examinations as a means of validating their students' study. The Chinese Spinning and Weaving Political Correspondence Institute and the National Law

Spare-time University both use the system, thus following the regularization indicated in Chapter 8 (note 15) as laid down in the State Council regulations.

So the self-study system is flourishing in Zhejiang, and has gained a momentum of its own. The magazine *Zhejiang Zixue Kaoshi* is indicative of this. Its bimonthly issues contain a few general articles on national and provincial regulations or conferences, news information (such as examination timetables), and a few feature articles, with the bulk being tutorial notes and past examination papers and model answers. This in a sense forms the link with the student body.

The comparative size of the distance learning systems

So far I have dealt with each system separately, at times comparing them with either the whole of the conventional or adult higher education system. I now want to look at the overall picture, in as far as there are data to do it. I will only look at size because evidence of qualitative judgements about the relative strengths of the systems has not been systematically collected within China. In using figures from the previous tables I face problems of both the availability of data and their comparability. To minimize these problems I have constructed two tables, one for the enrolments (Table 9.13) and the other for graduates (Table 9.14 overleaf).

Table 9.13: enrolments (thousands) for distance education systems in Zhejiang 1985-1989

Year		1985	1986	1987	1988	1989
PRTVU	F-T	20.6	18	15.3	12.3	13.1
	S-S	51.8	32.1	35	n.a.	45.1
CE	TE ¹⁶	n.a.	n.a.	3.2	4.1	5.2
	GE	5.4	6.0	6.8	5.2	6.2
	Total	-	-	10	9.2	11.4
<u>S-S (people)</u>		<u>n.a.</u>	<u>n.a.</u>	<u>n.a.</u>	<u>40</u>	<u>34</u>
TOTALS ¹⁷		114	98	100	103	104

Sources: Tables 9.4-9.7 & 9.9, using only the years 1985-89, to give the maximum data to compare.

Table 9.14: graduates 1985-9 for distance education systems in Zhejiang

<i>Year</i>	1985	1986	1987	1988	1989
<i>PRTVU</i>					
F-T	4,987	9,561	5,067	5,836	4,067
S-S	2,971	5,135	3,572	13,345	3,476
<i>Corres. Ed.</i>					
Diploma	n.a.	n.a.	n.a.	3862	n.a.
Degree	n.a.	n.a.	n.a.	1537	n.a.
Total	n.a.	n.a.	n.a.	4,536	n.a.
<i>S-S Exam (diploma)</i>	-	480	1,389	2,706	3,295
TOTALS	7,958	15,176	10,028	26,423	10,838

Sources: Tables 9.4-9.7 & Table 9.9, using only the years 1985-89, to give the maximum data to compare. 1988 correspondence education figure *Guojia jiaoyu weiyuanhui jihua jianshisi* (1989, p.310). Note the total for 1988 will not be directly comparable with other years, because of the addition of correspondence education.

Any conclusions on the basis of these tables must of course be circumspect. The incompleteness of the data, and the difficulty in comparing, for example, the participation in the self-study examination with enrolment in correspondence education make a detailed analysis difficult. Comparing the size of each system as indicated by enrolments and graduates shows that the RTVU in Zhejiang is larger than both the self-study examination system and correspondence education. If the RTVU self-study students are compared with the self-study examination system participants then they are about the same size. Contrary to the national trends (see Tables 4.6 & 8.13) correspondence education is much smaller than the RTVU.¹⁸ By way of comparison it is worth noting that the Staff and Workers' Universities and the Management Cadres Colleges had a combined enrolment of only about 7,000 students in 1987 (Zhejiang PEC, 1988). This is less even than general correspondence education (in universities), and much less than either of the other two distance education systems.

The output of graduates shown in Table 9.14 is incomplete without correspondence education. But if it is estimated then some comparison can be made with the conventional

sector, as was done in Table 9.1 at the beginning of the chapter.¹⁹ I have done this for 1985, 1987 and 1988 so that comparisons can be made with data in Table 9.1, and these estimates are shown in Table 9.15.

Table 9.15: comparative numbers of distance education and conventional graduates (thousands) for Zhejiang in selected years

<i>Year</i>	<i>1985</i>	<i>1987</i>	<i>1988</i>
Conventional education	11.0	15.0	18.7
Distance education			
PRTVU	8.0	8.6	19.2
CE	1.5	2.0	3.9
<u>S-S Examination</u>	<u>-</u>	<u>1.4</u>	<u>2.7</u>
<i>Total</i>	9.5 ²⁰	12.0	25.8

This comparison shows how distance learning had, by 1988, overtaken the conventional system as a supplier of diploma graduates in Zhejiang (118%). Table 8.13 showed a similar national trend for adult education in 1988, but by 1990 it had slipped to about 95% of the conventional sector's output of graduates. Thus similarities with the national situation mask significant differences within particular provinces and again emphasise the need to look at local contexts. However, explanations as to why there are such differences in Zhejiang must be the subject of further research.

What is important to also bear in mind is the fact that both the RTVU and self-study examination systems have other strings to their bows. In addition to producing graduates with diplomas, they also give opportunities for individuals to study selected courses, and in considerable numbers. Further, the development of inservice, continuing education and professional certificate programmes adds to their impact. For the RTVU these non-diploma programmes show some, though unsteady, growth. The size of the self-study system in this area is uncertain, as is indeed that of the conventional system for it would require a wider look than just at universities. Universities like Hangzhou have a big programme of professional certificates (see p.326), even compared with the 1988 figure

for the PRTVU (see Table 9.3), but it would need a separate study to investigate this area. This is especially so given the fact that it is a relatively recent phenomena.

INTEGRATION OF THE DISTANCE LEARNING SYSTEMS

Introduction

The discussion in the last section has shown how important the distance learning systems are to higher education in Zhejiang. However, as indicated at the end of Chapter 8, their separate development is not in the best interests of the province, as perceived by the Provincial Education Commission. In this section I want to examine the lack of links and explore the potential for integration through universities, such as Hangzhou University, and through the Provincial Audio-Visual Centre. Although I indicated in Chapter 8 that there were calls for integration, I want to discuss in this section the impact of a lack of integration and possible ways of improving this situation. In particular I will consider integration encouraged from central government (a 'top down' approach) and at the level of counties, townships and villages (a 'bottom up' approach).

Separate systems

I will consider how the three systems appear to operate separately in Zhejiang, and what links exist. In fact there are few links reported and those interviewed said very little about them, except when prompted.

The links between correspondence education and the RTVU are not very good, with unspecified financial problems preventing them from making links. The PEC claim, however, that there is some credit recognition between the two. Although joint use of material does exist, the fact that the two systems use different teaching plans means that correspondence education teachers do not encourage their students to use RTVU material. Despite the State Education Commission's efforts to stimulate the joint development and use of material no real progress had been achieved by the beginning of the 1990s.

Despite the independent development of the self-study examination system, there is some evidence of a recognition of the need to collaborate with other distance education systems.

At the provincial level the system has circulated a document to other adult education providers on the mutual recognition of courses, and prepared teaching outlines for ten courses common to a variety of economic management specialities.²¹ The idea of the common teaching outlines is to be able to hold a unified examination for other providers. Although this was said in the context of collaboration with the RTVU and correspondence education, it seems to be geared to adult education in general, and would be of more use to conventional adult education institutions. There is no evidence of the outlines having been drawn up collaboratively.

However, as with other areas in China (see Chapter 8, p.295-6), there are examples of collaboration through student support at the prefecture level. In Zhoushan Prefecture, Dinghai county, the local government set up an adult education centre to be staffed as a RTVU workstation, a self-study examination office, a general adult education centre and a television secondary vocational school (using the broadcasts discussed in Chapter 5).²² This centre is equipped for off-air video recording, but not satellite reception, and with fifteen rooms and its own staff it can provide tutorial support for self-study students, through whichever distance learning system they prefer. The costs of this common facility are shared by the various systems that make use of it, thus making it more cost effective than separate provision.

These large distance learning systems therefore remain separate in all their major spheres of operation: curriculum, organization and administration, and the support network for students. Worse still, as I will show shortly, the systems duplicate facilities and tasks among themselves. As I have noted already this separateness is indicative of both the separate development of the systems and their success.

The conditions of change in government policy away from diploma qualifications is unlikely to create a conducive climate for collaborative activity. I have already noted the indication of 'unfair' competition that CRTVU staff saw in the self-study examination's open entry, and there is also likely to be a general insecurity for the RTVU that comes with change. But I have no direct evidence from Zhejiang to confirm a worry about the

climate and the effect of changes in government policy on the desire and possibilities for links.

The potential for integration

This potential will be examined through considering two different types of institutions. Firstly, Hangzhou University, which, like many universities offers correspondence education and is involved in the self-study examination system. Secondly, the Provincial Audio-Visual Centre, that services an extensive network of facilities. Both of these have potential to integrate some of the functions of the distance learning systems.

Hangzhou University

As the second largest university in Zhejiang, after Zhejiang University, and a key provincial university, Hangzhou is typical of universities nationally that run correspondence education. The adult education department contains staff who specifically look after the evening university, correspondence education, and the self-study examination system. I will deal with each of these in turn, but with the evening university only briefly to give some comparison with distance education systems.

The evening university was restarted in 1979 after the Cultural Revolution with three specialities on offer (mathematics, Chinese and English) and 325 students registered. In fact at this time it was managed by the Education Teachers Trade Union, but in 1981 it came within the adult education department as the Hangzhou Evening University. By 1990 it had 893 students studying 16 specialities, two (Chinese and English) at degree level, the rest at diploma level, and had produced 1,205 graduates. Students attend classes five times a week, three in the evenings and two in the daytime. It attracts more applicants to study than correspondence education, but is only open to residents of Hangzhou city.

The University also runs a number of professional certificate courses (7) that it has agreed with the relevant local government departments (e.g. the Township Enterprise Department). These involve full-time and spare-time study, and are part of its

conventional offering (i.e. not part of the self-study examination system or correspondence education). This is a substantial programme, with a 1990 enrolment of 984, and 324 with certificates up to 1988.

Like other universities in China Hangzhou started correspondence education in 1957 and recruited secondary school teachers to study mathematics and Chinese at diploma level. It grew through this period and in 1959 introduced degree study, by which time it had 5,030 students. After the disruption of the Cultural Revolution it did not resume until 1983, again with mathematics and Chinese, but only at degree level. Since 1985 diplomas have been available, and in 1990 there were fourteen specialities, with a total of 908 students some of whom were school leavers. There were 1400 graduates in the period 1983-90. It is therefore about the same size as the evening university. There are no annual statistics available to indicate the trend of development, but in 1990 the provincial government quota of 900, for both correspondence education and the evening university, was not met (only 800 applied). The decline is for the same reasons given at the beginning of the chapter, excluding government policy (employers reluctant to release workers because of effect on production and their demand for promotion on graduation).

Unlike the evening university it operates over a wide geographical area, including correspondence education centres outside the province in Guilin (Guangxi) and Chengdu (Sichuan). The other centres are in the main cities and towns within Zhejiang: Ningbo (2), Xiaoshan (1-2), Huzhou (4-1), Wenzhou (3) and Jiaxing (4-2), (see Figure 9.2 for locations shown in parenthesis). The 'tourism' speciality is offered in Guilin and Chengdu, with 80 and 45 students, respectively, in each centre. In all centres some specialities have all courses supported by Hangzhou University staff directly, and in others only the main courses are done by them, with the centre doing the rest. The actual teaching and planning of courses is done by the normal academic departments with administration by the Adult Education Department. The academic departments also produce teaching material, in addition to using nationally produced material.

For the self-study system Hangzhou University manages five specialities: mathematics, Chinese, English, politics, and law. It produces the examination papers and the associated

teaching material, but does not appear to organize the examination or associated marking (there are only two self-study staff in the adult education department). Since 1984 some half a million people have taken the examinations over twelve sittings, with 10,000 graduates since 1985. If this is an accurate figure it indicates that Hangzhou University is responsible for most of the students in the province (there were 12,600 graduates in total). However, it is difficult to reconcile this with the fact that individual *courses* within a speciality can be set by national, inter-province²³ or provincial groups, and the fact that provincial ones do not seem to dominate.²³

Hangzhou University does not offer any direct tuition support to self-study, thus not being guilty of some of the practices criticized by He Dongchang (see Chapter 8) of not separating teaching and assessment. The magazine *Zhejiang Zixue Kaoshi* has, however, many articles by Hangzhou academic staff in the section containing tutorial notes. The use of books published by the University is not a route for such corruption, with only six of the nearly eighty books recommended in the 1990 session being from the University.²⁴ Not only does the separation of teaching and assessment prevent Hangzhou University from being more intimately involved in the student support system of the self-study examination system, but it does not seem to be connected to the RTVU system.²⁵ Thus the potential for the University to act as an agency for combining all three distance learning systems is not realized. It is likely that this will be true for other universities in the province.

The Audio-visual Centre

This Centre is administered by the Zhejiang PEC and it in turn administers the city and county audio-visual centres. It was set up in 1984 to deal with audio-visual education across all the sectors of education with the specific tasks of:

- a formulating policy for audio-visual education;
- b planning of the audio-visual education for the province;
- c editing, producing, collecting and distributing audio-visual materials;
- d publicizing and popularizing successful experience;
- e guiding users, and repairing and buying equipment;

- f training producers and technicians;
- g carrying out research into audio-visual education.

The network of audio-visual education in the province is elaborate. First there are the 900 secondary schools and teacher training schools that the Centre services. Second the Centre is responsible for the audio-visual resource centres who collect and store material in all counties and in most districts. Third there are 68 sets of satellite receiving equipment in the province, 36 in the local audio-visual centres, and 32 in the RTVU system. Fourth there are 300 'centres' for showing video-tapes, mainly for teacher training. In 1990 the Centre was trying to set up a network for watching satellite programmes, for all types of courses (secondary vocational, Television Teachers' College, and general education). But full integration of all the systems that use audio-visual media, including television, is only being piloted in five counties. The hope is that this integration, to include the RTVU system, will eventually be based on a provincial educational television station. Some counties already have a local broadcasting facility (for re-transmission), others only have recording facilities, and yet others have no facilities. All this is an extensive network to co-ordinate and integrate.

At present the pattern of distribution of video material is either:

- a through the local re-broadcasting of programmes (from either microwave or satellite), where the county has such facilities;
- b or the provincial Centre recording and duplicating video-tapes for distribution to the 300 local 'centres'.

I have no data on the balance of activity, but it appears that video-tape distribution is the major means, supported by the fact that the Centre staff emphasised to me the problem of mountains in Zhejiang making it necessary.

The Centre itself has a television production capacity for local needs and makes about 100 hours a year. Such local needs would include the conventional universities. It has, however, also made programmes for national needs, including both for the Television Teachers' College and the secondary vocational programmes on CETV. The examples of programmes they showed to me illustrated effective use of studio facilities, graphics and

animation, as well as outside location recording. These were not just once-off programmes but included series of up to 50 hours.

The balance of their servicing work is mainly the satellite television programmes other than those of the RTVU, and includes an overall responsibility for the network of recording, distribution, and viewing. From the PEC's point of view it sees the emerging network as a unified one, including the RTVU, which currently duplicates all the facilities of the Centre. I have already shown the duplication of facilities within the RTVU system, and the Audio-visual Centre and its associated network represents a further strand. The future developments foresee an integration, but that is as yet unrealized.

Solutions to integration

This sub-section will consider two approaches to integration, one originating from the central government, through regulations, and the other from activities at the provincial level and below. Both reflect the existing mechanisms of integration referred to earlier in this part of the chapter.

The 'top-down' approach

Chapter 8 ended with what appeared to be pleas from within the self-study examination system for links with the other systems. It was the publication of the 1988 self-study examination system regulations that prompted the editor of *The People's Daily* to propose links with the other systems. This was not the initiative of the self-study system alone, nor a lone editor stating the obvious logic of such links, but part of a national effort by the State Education Commission to encourage collaboration. Just over a month later, in May 1988, the State Education Commission issued regulations on the co-ordination of *all* of adult higher education.²⁶

These regulations were primarily about the co-ordination of the distance education systems, but also included the Staff and Workers' Universities and Management Cadres Colleges. The distance learning systems included radio and television education (i.e. the RTVU and the Television Teachers' College), correspondence education (including

independent correspondence institutions), and the higher education self-study examination system. It was recognized that each system had a strong influence on adult education, but that if each stayed firmly entrenched in its own system, without links, then the healthy development of adult education would be hindered. Collaboration was defined at different levels and in several ways.

- a Nationally the conventional universities, the RTVU and the self-study examination system should set up a group to reform the diploma teaching plans. Thus for each specialism there would be the same content and teaching materials defined by a single teaching plan and syllabus.
- b Nationally a credit transfer system should be used for those specialisms that did not have a single teaching plan.
- c At the level of individual Staff and Workers' Universities and Management Cadre Colleges (that were to jointly run classes), they should set up RTVU classes, or self-study examination and correspondence education tutorial centres. This would allow students of these two types of colleges to choose to study courses of one of the three systems. Alternatively they could also merge the three systems at the level of the classes they run.²⁷
- d For middle- and small-sized cities the RTVU (but not the Television Teachers' College)²⁸ should combine with short-term industrial universities, education colleges and teacher training (diploma level) schools to run classes.
- e At the townships and villages of county level and below they were, according to local needs, to combine RTVU classes, and, self-study examination and correspondence education tutorial centres.

The links suggested by these regulations do not require wholesale integration of the systems, except at the level of classes, but even here they need not be universally applied. They require the systems to have a unified curriculum, but allow them to 'deliver' it through their own networks. My analysis in this chapter has pointed to the need to also deal with these networks, especially for the audio-visual media. Although the State Education Commission is encouraging links (and indeed combining) at all levels of the systems, the use of regulations, its only device, represents a 'top-down approach'. To deal with the networks, and to implement the township and village level integration, a 'bottom-up' approach is needed. This approach is needed because, firstly, a formal unification of the systems in their entirety would make them too large and unmanageable, and perhaps too powerful for provinces to control. Secondly, the networks upon which the most profound integration will take place are at local level. Nevertheless the central regulations lay the basis for the 'bottom up' approaches.

The 'bottom-up' approach

The combination of classes at county, township and village level represents the 'bottom-up' approach documented earlier at places like Dinghai. For local authorities at these levels the incentive is large in terms of conserving scarce resources. Staff at this level, even those associated with the RTVU, with its strong vertical integration, are more likely to identify with the local education authority than the distance education system. This would be strongest at, for example, factory level where the use of any system is intended to meet the factory's specific needs. A similar view will exist at the local government level.

Within the Zhejiang PEC there is certainly an interest in and concern for links across the systems. The views of those in the provincial Audio-Visual Centre are not just those of an interested party, interested in its own development, but are shared at the level of the PEC. The Vice-Chair of the Education Commission, Professor Chen Wenxing, has a vision of links that deals with the networks that are omitted in the State Education Commission regulations. As I have already indicated there is a need to rationalize at a local level the audio-vision provision, and he sees this through the rationalization of the resource centre, RTVU workstation, audio-visual centre and the teacher training school. The RTVU workstation would be located in the resource centre to symbolize its move away from an 'academic' centre. The formation of a single centre for these audio-visual facilities and associated educational activity, will include the current video-replay methods and the local re-transmission discussed earlier. The latter requires the establishment of a local educational television station. The focus on the local level is to ensure local relevance. It also includes the joint use of equipment and the joint running of the self-study examination system and the RTVU.²⁹

But there was a sting in the tail of this seemingly reasonable approach. The (symbolic) move of the RTVU workstations to resource and audio-visual centres will be made as the RTVU reduces its diploma work and the number of these students falls. Thus in the PEC's vision the linking of the systems is identified with the changing role of the RTVU to include all levels of adult education. Professor Chen emphasised this by seeing the openness of the RTVU to cover the range of education offered (not just higher education)

as well as being open in geographical terms. He saw the *da* in *daxue* (literally 'big study' and meaning 'university') as referring to 'big' integration not 'higher education'⁹⁰

It is such thoughts that no doubt were running through the minds of the CRTVU staff when they were commenting upon both the competition of the self-study examination and the government's call for a de-emphasis of academic education. A move away from diploma education could not only change their status as a higher education establishment, but take away their independence. Thus seemingly reasonable calls for links could become a threat. As I have said I have no direct evidence of this threat at provincial level but it would be difficult to imagine it not being present.

The advantages and disadvantages of integration

Having established that little integration exists, despite there being a potential for it through some of the provincial institutions, it is worth considering what problems this causes, and what benefits might accrue from more integration. The advantages and disadvantages are different for each of the major parties in the system, namely the State Education Commission, the Provincial Education Commission, the distance learning systems as a whole, and the student. I will examine each of these parties before going on in the next sub-section to possible ways of encouraging integration.

For the State Education Commission the concern will be for both quality and cost effectiveness. Many of the regulations considered in Part 2 were directed at maintaining quality through control of curricula and examinations. An integration of the systems would help to make this aspect of quality more uniform and extend the influence of the conventional universities into the adult education sector. I have already postulated a role for the self-study examination system in regulating this aspect of quality (Chapter 8), and integration would extend it to the distance education sector rather than to the other adult education sectors. But there are disadvantages in this form of integration. National definitions of curricula reduce the potential for satisfying local needs, a fact recognized by the State Education Commission in the 1988 regulations on the decentralization of

approval of specialities in correspondence education to the provincial level (Chapter 7, p.235).³¹

Regulations do not ensure the quality of the process of learning. In the case of correspondence education there have been many regulations covering the teaching and learning, yet a general difference in teaching standard exists. This is caused by some correspondence education centres not being strictly run and not following a uniform standard, while others do. But it is possible that if the State Education Commission has confidence in the RTVU teaching material and support system, then an integration of the systems may help to standardize this through the RTVU teaching programme. It will also mean that the use of television will be extended to correspondence education and the self-study examination system.

Cost effectiveness for the State Education Commission comes through the greater utilization of the capital equipment it invests in. This is mainly the RTVU television equipment, particularly that obtained through the World Bank loan, which central (and provincial) government has to repay. The integration with other systems may also make use of the excess studio capacity that exists, by increasing the number of students and perhaps academic programmes served.

The Provincial Education Commission's view of integration is to ensure it occurs at the provincial level. Firstly, the needs for trained personnel must be co-ordinated, and I have already indicated a possibility of there being overlap in teacher training. For example, the RTVU has had teacher training specialities but this provision has been in addition to both the extensive conventional provision in teacher training colleges and correspondence education in universities and teacher training colleges. This is not so much a product of the lack of integration of the distance learning systems as a reflection of the divisions within the PEC between the teacher education, higher education, and the adult education departments.

How the integration takes place over the definition of specialities is also important. All three systems have an element of provincial level of approval of specialities, although this

is weakest in correspondence education (but this is changing), and in the formal position of the RTVU. If therefore integration means a national definition of specialities, as was common in the RTVU, then the PEC will lose the control to suit the needs of the local economy by defining its own specialities.

By far the biggest problem for the PEC is the duplication of facilities for which it has to pay. In the RTVU this occurs between various levels within the system, with for example Hangzhou MRTVU duplicating Zhejiang PRTVU video recording and copying facilities, and similarly with Xiaoshan's copying facilities. Laboratory and classroom space is also duplicated. The most serious problem is between the RTVU and the Audio-Visual Centre, and the associated support centres at village and township levels. This is a question both of total cost of providing such expensive facilities and of cost effectiveness in their efficient use.

Cost effectiveness applies equally to the distance learning systems, so that they too would benefit from integration. Tutorial centres could be better utilized, and established in a wider range of places, possibly allowing more rural students to participate. Equally they would benefit from video production and distribution by a single system, or at the very least a sharing of production capacity. But of course the difficulty for each system is that integration poses a threat to the individuality of each, and to the staff who have spent so long establishing relatively successful independent systems.

For the student the advantage of integration is the mobility and choice that could be offered through credit transfer. Also the sharing of material including print and audio-visual allows a wider access to learning support. This support extends to the provision of tutorial centres, and combining the systems gives the students, especially those in rural areas, a better chance of finding one close to their homes.

Prospects

The task for the PEC is not only to control the individual distance education systems but also to try and bring some form of co-ordination in the systems' efforts. As I noted at the end of the last chapter, integration is seen by the Zhejiang government as a difficult task

for such independent systems. That it is necessary can be illustrated by the example of teacher education, where the Television Teachers' College, correspondence education, and to a lesser extent the RTVU are providers. For a PEC faced with ensuring the implementation of the nine-year compulsory education programme it is important to use each system effectively and in concert. Although I have not investigated this issue in detail, the systems are evidently not working in concert. For the general provision of higher education qualifications (diplomas and degrees) the situation is more complex. Not only are there local government requirements in meeting the needs of the local economy, but there is the need to respond to demand. This tension is evident in the open entry of the self-study examination system compared to the controlled entry to correspondence education and the RTVU.

What will happen with regard to integration of the systems in Zhejiang will depend upon the results of the pilot projects. What will happen with the formal collaboration among the systems at a provincial level is more complex. Professor Chen did recognize that the idea of 'ownership' was at stake, and that the combination of equipment and facilities could not be done by decree, but had to employ personal contacts and hence persuasion. Given the determination of the PEC, it seems inevitable however, that some form of integration will take place.

NOTES

1. This was a point made by Zhejiang PRTVU in explaining why they had a smaller number than Jiangsu PRTVU (interview 10 May 1990).
2. The 1988 figure is from SWB FE/W0080/C/7-12, 7 June 1989, and 1987 ones from Zhejiang PEC (1988).
3. *Guojia jiaoyu weiyuanhui jihua jianshi* (1989, p.290-1). This may be an underestimate because the other figures for adult higher education and those from conventional higher education from this source are all lower than those obtained from the Zhejiang PEC and given in Table 9.1.
4. All the information in the remaining part of this chapter was obtained in interviews and visits to the Zhejiang PEC and the various systems and institutions mentioned during May 1990, unless otherwise stated. I will not therefore specifically reference points unless it is appropriate to identify a particular source, or to identify documents.
5. The 1989 figures show a decrease for Zhejiang with a total staff of 1092 and teaching staff of 455 (Zhejiang PRTVU, 1989b).
6. It seems that in 1982 a change in the method of categorising students took place, such that after that date the 'TOTAL' admissions in Table 9.4 roughly correspond to the 'Diploma' admissions in

Table 9.3. Throughout the period 1979-88 the sum of the self-study and single course students in Table 9.3 corresponds roughly to the 'Total S-S' (total of 'single course' and 'free viewers') column in Table 9.4. For at least the first three years in Table 9.4, those who study single courses, but who are registered and take an entrance examination, are distinguished from those who are 'free viewers'. Unfortunately these figures do not match those given in Table 9.3! In another leaflet (Zhejiang PRTVU, 1988) where 'single-course' and 'free viewers' are distinguished the 'single-course' figure stops after 1982 and only 'free viewers' are shown.

7. A footnote to the table of data for Guangdong PRTVU describe such students as 'organized free viewers' (*you zuzhi de zixue shiting*) (Xie & Li, 1990, p.750).
8. Examining the percentage of self-study students *admitted* in 1988-90 (Table 9.4) gives figures ranging from 87-90%.
9. I have already noted the RTVU's modest contribution to secondary school teacher education in 1982.
10. In fact the years given were academic years 1987-88, 1988-89 etc., thus figures for graduates will not correspond to the years used in other tables.
11. The provinces (and one city) of east China are Shandong, Anhui, Jiangsu, Shanghai, Jiangxi, Fujian and Zhejiang. They initially met annually; for example in 1986 they met to discuss the marking of the Chinese Language speciality (ZJZXKS, No.5, 1986, p.1).
12. Another source said 1,400 graduated up to 1988, but it may be that this was only the 1988 graduations (ZJZXKS, No.3, 1988, p.51).
13. Certainly the figures for examination sittings number 9 and 10, where there was a slight growth in courses, do not bear this out. In sitting number 9 there were just under 1.5 certificates gained per person, and in sitting number 10 just over 1.5 (taken from Table 9.7).
14. 1989 figure was reported in ZJZXKS, No.5, 1989, p.3; 1990 was given by Zhejiang PEC (visit 1990).
15. For some reason not explained in the report this figure does not correspond to the total of 1,389 graduates for this year.
16. The figures for correspondence education taken from Table 9.5 in fact include spare-time face-to-face; taking the proportion of teacher to general education correspondence education as 40% would give figures of about half those given.
17. For those entries that are missing I have included an estimate in the total figure. For example, for self-study examinations the 1985 figure for certificates awarded is comparable to that in 1988, so I have assumed the same figure for people sitting the examinations, i.e. 40,000. For teacher correspondence education I have used the estimate of 40% as indicated in note 16.
18. However, the national position has changed over the last few years with correspondence education overtaking the RTVU, and more up to date figures for Zhejiang may also show this trend. This must be qualified by the fact that the 1990 statistics for the RTVU, shown in Table 4.6, are for full-time students only and therefore ignore the recent shift to part- and spare-time study.
19. The method of estimation is to assume a fixed ratio between enrolment and graduation, which for correspondence education is about 5:1. Given that the teacher correspondence education is also being estimated this is very crude overall.
20. This figure is slightly lower than the 9,700 shown in Table 9.1.
21. ZJZXKS, No.4, 1988, p.13.
22. ZJZXKS, No.2, 1990, p.15.

23. This latter fact is evident by inspecting the 1988 statistics given to me by the PEC (May 1990): 28 courses are national, 31 provincial and 3 East China. Specialities like Chinese contain courses from all three sources.
24. *ZJZXKS*, No.3, 1990, pp.54-6.
25. The PRTVU did say the University ran their classes, but Professor Liu Yuling, Deputy Director of the Adult Education Department, did not mention this in my interview with him (12 May 1990).
26. *Guanyu cujin chengren gaodeng jiaoyu lianhe* (Opinions concerning the promotion of adult higher education co-ordinated running of classes), issued 14 May 1988, and reproduced in *Guan* (1989, pp.188-91).
27. The regulations also included adult middle school vocational education and "other systems" without being more specific (*Guan*, 1989, p.189).
28. This College was to rely on the local teacher training inservice colleges, teacher training institutes or separately organized classes.
29. Correspondence education was not mentioned at this point in the interview.
30. He contrasted *daxue* with *gaodeng jiaoyu* where the *da* was only to refer to 'large' not 'higher', more like the *da* in *guangda* than in *daxue*.
31. There are already violations of the regulations with some PECs not adhering to them and lowering the conditions for approval (*Zhongguo jiaoyu nianjian bianjibu*, 1990, p.246). This is a worry for the State Education Commission concerning the control of quality when decentralizing authority and parallels violations in the conventional sector (Smith, 1988a, p.27; *SWB FE/0183 B2/1-2*, 21 June 1988; *SWB FE/8030/BII/5*, 15 August 1985; *SWB FE/0076 B2/1*, 16 February 1988; *SWB FE/0098 B2/5*, 12 March 1988).

CHAPTER 10 THE PROMISE AND ROLE OF DISTANCE LEARNING IN CHINA

INTRODUCTION

In this chapter my main purpose will be to review the promise and the role of the distance learning systems that offer higher education. Both must be judged in the context of the particular situation in China, but also using the ideas on distance learning that have their origins outside China. My argument will be that many of the promises, in terms of improved learning, increased access, economic development and cost effectiveness, remain unfulfilled. Further, that a major reason for this is the government's desire to control quality and planning. This leads to a change in role for some systems by a move away from diploma and degree qualifications, for which there is a huge demand. The government seems to favour the conventional system, one that gives rise to many complaints, but in which they show an endearing faith. I will start with a consideration of how the context affects the development of the systems, then examine their promise and role. Finally I will seek to understand the factors that lead to lost opportunities in realizing the promise of distance learning in China.

CONTEXT

One of the aims of this thesis has been to understand the development of the distance learning systems within the specific context of China. Part 1 focused upon the national context, in terms of policy changes and material conditions. In Chapter 9 I looked at these conditions and local policies at the provincial level. It would be quite legitimate, however, to say that variations exist within a province, and that it is essential to look at say a prefecture or a county level. Indeed the description of how Xiaoshan set up its RTVU workstation and subsequently a branch school, because of its local economic needs (Chapter 6, p.191-2), indicates that this level has its own special requirements. Any level will have important lessons for understanding the systems and their development. In this section I want to consider some of the many examples of how the context has affected the systems to set the scene for the discussion in the rest of the chapter.

The policy context operates at a variety of levels and has more or less direct connection to the distance learning systems. Changes in the government's view of the relationship of education and the economy led to a cut back which directly affected the systems.

Chapter 2 has shown the importance of human capital theory in the thinking of the Chinese government, and how that has changed from a simple view of expanding education to drive economic expansion to one that recognizes a more symbiotic relationship between the economy and education. As later chapters have shown this resulted in a more cautious approach to the expansion of education, and a movement away from degree and diploma qualifications. Conventional higher education illustrated some of the problems of the human capital theory (e.g. oversupply of graduates; the effects of competition for entry to higher education on secondary schools). It is because of such problems, the rising costs of education, and the realization that investment may be better placed in basic education, that policy changed. As I have shown that change was applied differentially to conventional and adult higher education.¹

Adult education is assumed not to suffer from these kinds of problems because the students are in the main already in the economy. For the distance learning systems considered in this thesis there is evidence that there is a more intimate relationship between education and the economy that to some extent overcomes the difficulties of human capital theory. The case of Xiaoshan in Chapter 6 illustrated how the RTVU could respond to the needs of the local economy. Given that the size of the student body is the aggregation of many of the kinds of decisions like those in Xiaoshan, then some of the problems of labour planning (discussed in Chapter 2) may be avoided.

But the distance learning systems did not avoid the consequences of problems in matching education to the needs of the economy. I have already indicated problems for the RTVU and correspondence education in terms of a reluctance of employers to support students, and of potential students to come forward, because of the problems of promoting students. Although in theory a match can exist between the needs of the enterprise and the subject being studied by the employee, there may be more of a problem about the *level* of the qualification. Thus a worker wanting to improve his or her career prospects through

higher education may not be able to get promotion, especially in a relatively small enterprise. For the self-study examination system, with its 'market approach' through open entry, individual workers may make the decision to study, but they still have to face the fact that they may not get promotion. To overcome this requires job mobility, so that a more appropriate job can be sought in another part of the economy.

This mobility involves a much wider context of economic policy, but evidently one that could have a profound effect on the distance learning systems. Elsewhere I have discussed the prospects for a job market and some of the innovations to encourage mobility (McCormick, 1986). As a centrally planned economy China is not well placed to create a job market. While the innovations I examined show some hope, there are few signs that it would make much difference to those attracted to distance education at least in the foreseeable future.

Obviously the development of distance learning systems depends upon **material conditions**. But even when conditions are apparently in favour of distance learning it may not turn out to be so, as a result of a number of factors relating to the context. The introduction of satellite broadcasting is just such an example. It offered the RTVU a way out of the irregular course presentation resulting from a lack of transmission time, and offered a prospect of reaching a wider geographical area. But the unwillingness of local television stations to re-transmit the RTVU programmes, and the expensiveness of satellite reception equipment meant viewing became more difficult. It required video distribution and replay facilities such that, at a time when part-time and spare-time students were increasing, their chance to view at home reduced.² In Chapter 5 I questioned the practicality of home study, and existing RTVU students still prefer to view at a centre (Chapter 6, p.175-6). Be that as it may rural students are disadvantaged by such a situation, when in fact satellite transmission should allow them a better opportunity to receive programmes.³

Material conditions as part of the context for distance learning also vary across China. Thus, in the self-study examination system trials in the early 1980s, areas where education was already well developed showed more participation (Chapter 8, p.264). Similarly

Zhejiang had a well developed network of conventional teacher training colleges which favoured the existing local correspondence education for teachers rather than the Television Teachers' College. The Provincial Education Commission Teacher Training Department was responsible for them both but favoured the local provision. This illustrates another aspect of provincial differences, namely that they produce different take-up and development among the distance learning systems. In Chapter 9 (pp.321-3) I showed how the trends in Zhejiang for each of the distance learning systems did not follow national trends. For example, the RTVU was the largest and correspondence education the smallest system in Zhejiang, contrary to the situation nationally.⁴ Similarly Xiaoshan Branch School in the RTVU claimed not to have trouble recruiting students, whereas nationally a reduction in demand was experienced (Chapter 6, p.192).

There are a number of factors that are likely to cause such provincial differences, some relating to the material conditions, but other related to local politics and personalities (Shue, 1988, p.56). Zhejiang PRTVU's ability to retain 'self-study' students in the face of a government ban on their recruitment seems to be a function of the personal influence of the Vice-President. This relates to the way power can be localized and I will return to this when I consider 'control'.

At times the myriad of contextual features that have affected the distance learning systems lead to a complexity that is difficult to unravel. They certainly have made it difficult to identify the causes of certain developments. Not least is why admissions to distance education have been cut, when, as I shall argue in the next section, it has shown some promise. I have only a partial explanation of this through the issues of 'quality' and 'control', that will be considered later. But with such complexity it is as well to caution against looking for tidy explanations for what I take on the face of it to be irrational behaviour.

THE PROMISE OF DISTANCE LEARNING

The first chapter of the thesis laid out two main ways of looking at the role of distance learning in China as it relates to higher education. The first was the way in which distance learning takes up the tasks of the conventional system. This includes its role in fulfilling the needs for higher education that the conventional system cannot satisfy, as well as those which it can, and which therefore places distance learning in a position of competition. The second way of looking at distance learning is from the international perspective of ideas on distance education. China has been admired for its general approach to adult education, especially by those of a socialist persuasion (e.g. Youngman, 1986), and its combination with distance learning intensified this interest, especially as it increased openness. Chapter 4 has shown that in line with developments elsewhere in the world this has given way to a preoccupation with economic development, and adult education has become more concerned with work-related training. This does not make it of less interest to those educators concerned about distance education, as it is the largest implementation of this form of education in the world. Chapter 5 explored some of the general issues from the distance learning literature that have led governments and educationalists to see great promise in distance learning. Some of these were related to pragmatic concerns (e.g. cost effectiveness), and some to educational ideals (e.g. learning), found both in Maoist China and within the distance learning literature. An issue such as 'access' also has a resonance in the earlier development of education in China, and so takes its cue from that context and not just the international scene. Chapter 5 concluded that the headings of learning, access, economic development and cost effectiveness, could be used to examine each of the distance learning systems in Part 2. These headings take in both the specific concerns of the needs of China and those who advocate distance learning. In this section I will therefore draw together the comments on individual distance learning systems to provide an overview of the promise of distance learning systems.

Learning

In Part 2 I examined the learning experience for each system, but only in the case of the RTVU were there any substantial empirical data available on this experience. Each system did show a central recognition of **self-study**, and, in the case of correspondence education and the self-study examination system, this was evident in the pattern of study. The RTVU recognized the role of self-study but while students were mainly full-time, and also had to watch a great deal of information-transfer type television programmes, this practice did not match the recognition. The shift to more part-time and spare-time study will put pressure on the RTVU to change. Correspondence education recognized the role of assignments in supporting learning for those relying on self-study, although whether the nature of the assignments and the tutor comments actually did support learning is difficult to judge. This recognition is in contrast to the principle of the separation of support and assessment in the self-study examination system. The self-study element in each system encouraged *individual* learning, and thus discouraged *group* learning. This was the case even in the RTVU, which had the conditions for group learning for full-time students. There was evidence of correspondence education and self-study examination system students setting up groups (See Chapter 8, p.295, and Chapter 9, p.325), but this appeared to be the exception. Thus the heritage of the Yanan days is lost in the modern movement of self-study.

The **use of media** was an issue of debate for conventional higher education in Chapter 3, and I have shown that in terms of availability of media the RTVU has made great strides. It is capable of producing good television programmes, but does not appear to exhibit this capability in its regular programmes. In part this is because of the study pattern requiring large amounts of information transfer through television. The use of such media in the other two systems is minimal, although likely to develop.

Although the rhetoric of the systems recognises the needs of distance learners in using the traditional print medium, this recognition had still not been manifest in the texts, from what empirical evidence is available. Even for the RTVU with its use of a variety of

media there was little attempt to integrate the media, with a resulting overlap that was unhelpful to students.

There is no empirical evidence on learning in the self-study examination system, and all they have to ensure the quality of the teaching and learning are regulations. These regulations are not an effective means of guaranteeing the quality of the process of learning, as the measures of success considered below show.

The link between **theory and practice**, as I showed in Chapter 2, has a heritage in Maoist China manifest in part in the policy of combining education and work. Currently this policy is used for economic rather than political objectives. The lack of a link of theory and practice was a criticism of conventional graduates, one that adult education could overcome. For both the RTVU and correspondence education there is evidence that as working adults their students were better than conventional graduates in terms of how well they adapted to work and could deal with the needs of industry. The ratings of RTVU graduates and their employers showed them good at problem solving, but weaker on theory and on creative aspects of innovation. Again no parallel data are available for the self-study system, but the Vice-Minister He Dongchang expressed worries about the dominance of theory teaching.

Both the RTVU and correspondence education also exceeded the conventional system in ensuring a match between the student's speciality and his or her job. The RTVU strengthened this by allowing some local courses that could relate to a student's work. Correspondence education offered little more than conventional higher education in terms of the curriculum because it followed the same courses, but the new regulations on decentralizing the approval of specialities may change this.

As I argued in the first section, distance learning graduates also have problems finding a position in their enterprise that matches their new found status, even although they are well thought of and in many ways are more useful than conventional ones. But this is an indication of changes needed in the wider policy of job mobility, rather than a specific worry about their quality.

The measures of success considered in Chapter 8 (pp.279) give some overall indications of the quality of the learning experience. The data for these measures are not extensive but show that the RTVU and correspondence education both offer a good chance of success. That is much less so for the self-study examination system, where much persistence is required. There are few published reports of complaints, and certainly none on the scale of the conventional system considered in Chapter 3. The empirical evidence from employers only exists for the RTVU, and this was favourable overall.

In my view the distance education systems do much to improve the learning for students compared to that for the conventional higher education system, both in terms of the emphasis on self-study and in linking theory and practice. The RTVU, as the only distance learning system making extensive use of audio-visual media, brought a new element to higher education and hence fulfilled some of the hopes of the Chinese government. It may have improved the situation, but the RTVU is some way from fulfilling the promise of distance learning in this respect.

Access

First looking at **satisfying demand**, Table 8.12 indicated that a total of 2.9 million adults and school leavers may want a place in higher education, but failed to pass the examination. This figure is well within the capacity of the distance learning systems to absorb. Certainly all the adults who want higher education can get it through the self-study examination system, even if they have failed the entrance examination. But their chances of getting into the RTVU and correspondence education are diminishing even if they pass the examination, because of the overall cuts in admissions.

School leavers entering adult higher education represent only about 8% of the total admissions (see Tables 7.7 & 8.10), and only in the case of the RTVU did they reach a significant proportion of intake. The total number entering adult higher education is only a small proportion (about 1%) of those who fail to get into conventional higher education. The fact that school leavers do enter the RTVU and correspondence education systems is controlled by policy, rather than capacity. That policy is part of the general reductions in

admissions to the RTVU and correspondence education. It is also a reflection of the desire to avoid the costs of giving them full-time education (in the case of the RTVU), and possibly arranging contracts to ensure subsequent employment. Besides, the government is keen to encourage school leavers to seek technical and vocational education rather than higher education aimed at diploma and degree qualifications. But of course policy restrictions do not apply to the self-study examination system. There is, as I have said, little evidence that school leavers find the self-study system attractive so this could be to do with their lack of maturity for this kind of study. This lack of maturity would make it difficult for them to survive in such an unsupported learning system. They would have to organise their study, keep up its pace, and do so with little tuition, other than conventional books. More likely the reason for the unattractiveness is their view of the status of the system. It is probably viewed as a third or fourth choice behind conventional colleges, correspondence education, the RTVU and face-to-face adult education.

In terms of **openness** only the self-study examination system exhibited *open entry*; indeed it was one of its principles. The RTVU and correspondence education (at least in conventional universities) used the adult higher education entrance examination, and defended this on the basis of ensuring quality and allowing planning. The self-study examination system answered the first by talking of quality of output, not input, with a resulting low pass rate. If the integration of the systems leads to a loss of the self-study examination system's openness then this will be a major blow to this distance learning ideal. Another option would be for all self-study (spare-time) students who are currently in the RTVU and correspondence education, to use the teaching and learning facilities of these systems but not the assessment components. This might have a devastating effect on these systems if that meant they were not registered with them.⁵ Openness is not just an ideal of advocates of distance learning but one that was advocated in the Mao era, and any reduction in open entry by the self-study examination system will be an important blow.⁶

Open learning as an ideal was not well served by the distance learning systems considered in Part 2. All were high on 'structure', leaving little room for matching

individual student's needs. Only correspondence education showed much evidence of 'dialogue' and even here it was only through comments on assignments and answering student queries.

Similarly **disadvantaged groups** were not well served. The distance learning systems certainly have the potential to overcome geographical disadvantage, through post and television. But they did little to serve the rural communities let alone the remote areas. That could change if the satellite technology improved, but there are other obstacles relating to the kinds of courses offered and the support facilities available. The one bright spot was some evidence of the systems serving disabled people, especially correspondence education and the RTVU. But this does not appear to be widespread in the self-study examination system, if the number of newspaper reports is indicative of activity.

Economic Development

Table 8.13 indicated the crucial role of distance learning in **supplying graduates** to the economy, despite changes in the balance of output among the three systems. The future is difficult to predict as all sectors may be reducing. But, assuming that conventional higher education admissions stay at their 1989/90 levels, and the trend of reduction in diploma adult education continues, then distance learning will continue to drop as a proportion of adult education and the total graduate output.⁷ This of course reflects government policy to move to inservice and continuing education.

Chapter 3 examined a number of ways of estimating the need for graduates that gave several figures, but concluded that there was no strong case for a further general expansion of graduate output. Conventional higher education and adult higher education, including distance learning, seem to be producing all that the current state of the economy can absorb. There of course remains a demand from employers for graduates, but the government would argue that the economy must grow more before expansion is warranted for the economy alone. This view has prevailed in the government in as much as the latter part of the decade 1980-1990 has witnessed a decline in the sectors of higher education

that the State Education Commission influences. More to the point is whether the graduates are of the right kind, in terms of their level of qualification and specialism studied.

Distance learning, as a major contributor to adult higher education, is correcting the balance of **levels of qualification** (see Table 8.14). Despite the overall decline in output from RTVU, distance learning is providing for the needs of the economy in terms of the lower level of diploma qualification. What is more difficult to evaluate is how distance learning is correcting the **imbalance of specialities**. On the two criteria that I examined in Chapter 3, the area of the specialism and its narrowness, the distance learning systems do well. Table 4.11 showed how adult higher education as a whole was contributing to the correction of the imbalance of specialities needed by the economy. Unfortunately there are insufficient data to show quantitatively the contribution of all the three distance learning systems. What data I have obtained indicates that each is making an important contribution to needed fields of study such as 'economics and management'. Also most of the systems are reducing their supply of science and technology graduates. Taking the second criterion, none of the degree programmes are particularly narrow.

Chapter 4 gave a range of figures (from half a million to 30 million) for participation in **continuing and inservice education**, but no analysis of *needs* seems to be available on a national scale. More to the point, no indication of levels of provision are usually given. Thus all that is possible to do is to examine the total contribution to provision that distance learning makes.

Only the RTVU records statistics specifically on continuing and inservice education. Figure 6.8 showed that the total of this type, including professional certificates, approached half a million in 1986, although it may now be reducing (see also Appendix 3). However, as noted in Chapter 8, the contribution of distance learning in this area is of two kinds: the specific courses for continuing and inservice education, and the single courses that are taken. The annual capacity of the self-study examination system of 4.6 million (Table 8.2) means that the potential contribution to continuing and inservice education is very large in terms of single courses,⁸ although of course the motives of

people in participating is unknown. On any measure it is likely that distance learning is making the biggest regulated and systematic contribution to continuing and inservice education. It could, in quantitative terms, quickly update most of the urban industrial workforce in a very short period of time.

Distance learning's responsiveness to government policy, and to local needs is evident. This is particularly so with the RTVU, which has made massive switches in programmes to respond to what the government has seen as the current needs of the economy. Thus it expanded rapidly in total terms in the early 1980s, introduced humanities and social science subjects when the economy wanted them, and is now trying to respond to the needs for inservice and continuing education. It has done the latter, and also introduced secondary vocational programmes, in spite of some reluctance to see its diploma programme decline in importance. Correspondence education has not shown such responsiveness, although in global terms it has expanded. But it continues to do so when other sectors are stabilizing or reducing their degree and diploma output.

One area where the distance learning systems have yet to make a significant response is in rural education. Although the RTVU has had some agricultural diplomas, and is now developing the *liaoyuan* school, these are only modest beginnings. Neither of the other two systems have made any real effort in terms of their programmes. But a more fundamental problem exists, even for the RTVU. This is the access to the systems, both in terms of the teaching material and the support network. For the RTVU, based traditionally on workstations, this is an understandable situation, and one which the move to part-time and spare-time study could alter. However, for the moment the state of the satellite technology means that the rural areas only have access to RTVU television programmes through video-replay, and this still requires a centre in the rural area. Correspondence education suffers from similar problems to the RTVU, without that of television replay, even although in theory the postal system should serve rural areas. The self-study examination system should not present any problems, but as I argued in Chapter 8, there is no evidence of any activity in rural areas.

As I have argued earlier not only have the systems been responsive, but they have gone some way to satisfying the needs of the economy in terms of the specialities, the level of qualification and the skills of graduates. They have done this with a degree of quality, and one that will allow them to improve in a way that seems unlikely in the conventional sector.⁹

Cost effectiveness

For the Chinese government both total cost and cost effectiveness are important. Chapter 3 explored the controversy over educational expenditure, and in this context the government is concerned not to incur too high a cost for any expansion of higher education. One way out is to distribute the costs away from central government, and the distance learning systems do this admirably. This helps to ameliorate the countervailing reason of the uncontrolled escalation of costs that might prevent the government from financing distance education. However, this has not been sufficient to allow the distance learning systems as a whole to expand diploma and degree education. The government has cut intakes just as it has in conventional higher education, but more strongly.

In Part 2 reliable figures for the cost per student-year were difficult to identify, but in summary they were:

RTVU RMB 300 yuan tuition fees per year, plus RMB 500 yuan salary costs for full-time students, but the move to spare-time and part-time would reduce or avoid this cost. (Total for full diploma RMB 900 yuan over three years.)

CE RMB 200 yuan tuition fees per year. (Total RMB 900 yuan for four and half year degree.)

SS RMB 302 yuan for the full diploma.

Clearly the self-study examination system is the most cost effective, but it does this by minimizing the teaching costs. In addition, although the figure above is an average for a graduate, it does not take into account the lower success rate of the self-study examination system (see for example Table 10.8). All of the figures compare favourably with the

figures for conventional higher education that put the cost at RMB 2000-3000 yuan per year.

However, in Part 2 I argued that it was the *threat* to these figures that was a more significant aspect to examine. In general the threats to all the distance learning systems came from the establishment of facilities (linked to a view of distance learning) and the improvement in media. A serious problem was the distribution of video, which at the moment only really affects the RTVU, but if greater use were made of it by the other systems then it would be even more serious.

Integration of the distribution and support networks at provincial and county level will provide a good opportunity to improve the use of media in correspondence education and the self-study examination system without incurring extra costs. Savings will also be possible if teaching material is shared, and the same television programmes used by all the systems. But the degree of integration is unpredictable and may not occur before correspondence education and the self-study examination system expand into television or video media.

THE ROLES OF THE DISTANCE LEARNING SYSTEMS

Each system is changing to different degrees, within the context of the policy to reduce diploma and degree graduates. This means that the original role of satisfying demand (including from school leavers) and of producing the main output of graduates has diminished. Because the RTVU (and to a lesser extent the self-study examination system) is affected more by the changes in policy, its role is changing dramatically. Indeed as noted above there has been little stability in its role over the years. As I concluded in Chapter 6, it could move away from being a university-level system. The move from full-time to part-time and spare-time study may halt the decline in diploma students, but with their slower through-put it will be some years before they show up in graduation figures. Which of the three other possible lines of development, namely inservice and professional education, rural education, and secondary vocational, becomes dominant will depend as

much on the degree of integration of the three distance learning systems, as upon policy emphases at national or local level.

Neither the self-study examination system nor correspondence education have undergone such radical changes of role. The stability of the diploma and degree programme of correspondence education is evident, although its enrolment of 40% teachers could be seen as indicative of a concern for professional education. But this is not a change of role. On the face of it the self-study examination system has not changed its role. It still absorbs the demand for higher education, although like the other systems its graduate output has on the latest figures dropped. This is because it is market driven, and, despite the pessimism about the benefits of education that surrounded the crisis in education (Chapter 3, p.56), participation is buoyant (see Table 8.2). The large participation could be seen as part of inservice education, given the relatively small graduate output. But since we know very little about the motive for participation it is impossible to verify this.

As I argued in the final section of Chapter 8 (pp.290-7), the role the self-study examination system takes will depend upon how the integration of the three systems takes place. As an independent system the 'shell' model (Chapter 8, p.293) acts only marginally as a distance learning system. If it does not combine with the other systems it is more likely to assume a regulatory system role for the rest of adult higher education. Integration would ensure that it operates as a distance learning system. It would also require the government to face the conflict over the differences in its policy on open entry to correspondence education and the RTVU on the one hand, and the self-study examination system on the other. If it did both sides could benefit with correspondence education and the RTVU becoming more open and the self-study examination system being able to offer support to learners. But as Chapter 9 concluded, although the prospects make integration look inevitable (at least at a provincial level), there are many issues of independence of the systems to dealt with at all levels.

CONTROL, QUALITY AND PLANNING

The promise and developing roles of the distance learning systems are determined by the issues of planning and quality. This was most obviously illustrated in considering open entry for the RTVU and correspondence education. Quality and planning are in turn determined by how control is exerted in the education system, and indeed in the government as a whole, local and national. It is my contention that these three ideas are at the heart of why the promise of distance learning is not fulfilled in China. Control has been the subject of policy changes and concern for some time in China, and so I will start with an overview of this in terms of the structure it operates under and the debate that surrounds it.

As a number of commentators have argued control has two dimensions in China, vertical and horizontal (Shue, 1978, p.55; Zhou, 1989, p.169). Vertical control is through central ministries or commissions of the State Council, and horizontal control is through the local governments at each level of province, prefecture, county and below. The State Education Commission and provincial counterparts were of course created to aid co-ordination, but they are faced not only with main line ministries who want to control their own education systems, but also with the distance learning systems wanting to act independently. It is important, however, not to overstate the independence of these two lines of control. Indeed Shue (1978, pp.56-8) argues that cadres who operate at the intersection of these two lines of control will follow one or other line at different times and on different issues. They do so to serve personal interests and those of the local situation, at whatever level that is. This explains local circumstances existing quite at odds with central policy, as for example occurred in Zhejiang PRTVU over 'free viewers'. There has therefore existed a tension between central authority, that operates through vertical control, and local authority through horizontal control. Over the years this has been exhibited in policies of centralization and decentralization, covering all aspects of government functions including education.¹⁰ The balance to be obtained is over central government's authoritativeness and local government's enthusiasm and efficiency, and also a concern for political unity and stability.¹¹ Others see different motives, and in apparent periods of decentralization see increased centralization particularly with relation

to curriculum content in higher education (Pepper, 1982, pp.187-96; Pepper, 1978, p.886; Rosen, 1985a, p.306). Thus apparent decentralization becomes a means of exerting more control by giving autonomy only within the local context. There is evidence of this in the control of the distance learning systems.

In the RTVU there is a strong central control over all aspects of the teaching, learning and assessment, but great autonomy (at a local level) over the administration and operation of the system, including what is offered and to whom. Correspondence education within conventional universities, while having autonomy at the level of a university, operates within a tradition and a regulatory system that in fact controls rigidly the teaching plans. However, this is complicated by the dual control over it through both departments of teacher training and higher education (Chapter 9, p.334). The self-study system is more complex than either of these. The regulatory framework gives central control, but only with regard to the content and terminal assessment of learning. The nature, operation, and administration of that learning is very diffuse. It does not even fit naturally into control at provincial or local levels of government, because students can opt in or out of the system at will.

Controlling the individual systems is in itself a problem because each local authority level may want to act independently. This is most acute in the RTVU, where local authorities like Xiaoshan want to set up facilities to serve their local needs and under their control. They may do this despite any duplication or lack of rationalization. This was particularly acute in Hangzhou where the PRTVU and MRTVU appeared to compete in provision, albeit that they serve different constituents. This leads, on a national scale, to the kind of local autonomy discussed in Chapter 6 where PRTVUs seek some independence from the CRTVU. Thus there is a contradiction of a system which has the strongest tradition of vertical control showing signs of decentralization and hence increase of horizontal control. It may be that this preoccupation blinds it to links with other distance learning systems. No doubt there are many issues of local politics and personalities of the kind referred to by Shue (1978).

The **control of quality** has been a preoccupation of the post-Mao era, but limited to academic standards. This has two elements. First is the role of central regulations and procedures that seek to control the standards. In the RTVU these are laid down by the CRTVU, and are the element of vertical control exerted by the system. The teaching plans and examinations constitute one strand of the control of quality, and this mechanism is the same in the self-study examination system. The RTVU adds to this the television programmes, which, although affecting the teaching and learning, also set academic standards of content through the use of expert academics from other (conventional) universities. The role of conventional universities, the second element of academic standards, is the central feature of ensuring such standards in the self-study examination system and correspondence education. Conventional universities' involvement in drawing up the teaching plans and setting examinations for self-study and their direct running of correspondence education guarantee quality for the government.

These systems are used as a means of regulating the rest of adult education, either through the self-study examinations or the legislation to combine the systems (Chapter 8, p.296). This accentuates the 'regularization' of adult education that was discussed in Chapter 4 (p.95), by giving conventional universities a direct influence over the curricula of adult education. Not only may this ignore the unique characteristics of adults, but also make this sector suffer in the way the conventional one does from problems of inappropriate courses.

All the distance learning systems have strict administrative procedures that are designed to ensure quality, and prevent malpractice, although with the decentralized administration this will be difficult to control. For example the use of an entrance examination in theory provides a common control over entry quality, but, given the local discretion about acceptable pass scores, this control is weakened. It may be for this reason that the control over curricula will not be relinquished by the central authorities of distance learning systems (e.g. CRTVU and the National Self-study Examination Guidance Committee), as being the only sure vertical control the government has. This also explains the reluctance to allow local courses, in response to local needs, to constitute more than a small part of

the total requirements for study, and the prevention of provinces approving self-study examination system specialities created by employers (Chapter 8, p.288).

The control of teaching plans and examinations in the self-study examination system ignores the central activity of the teaching and learning process. Provinces may have control over part of the the examination system (through their self-study committees), but little over the provision and administration of learning. A strangely anarchic state of affairs for such a regulated country like China! It is this 'anarchy' that leads to abuses such as poor quality material and tuition, sometimes to the extent of fraudulent practices.¹² It is no wonder then that a provincial government may seek ways of combining some of the distance learning systems in an effort to bring some logic and control to such a situation. This could bring the control over some aspects of learning afforded by the RTVU to the self-study examination system.

There remains, however, the enigma of the self-study examination system, with its 'market' style approach to educational provision. A desire for control over this cannot be seen simply in terms of a centralist government intent upon controlling as much as it can.

Control is also concerned with **planning**, linked particularly to social and economic planning. In the education system this implies controlling graduate output to meet the needs of the economy, and for conventional higher education that means linking admissions and job assignment. It also means controlling costs of education, or at least controlling central government's costs. The post-Mao era has seen the introduction of market principles to some extent in the economic system, although Shue (1978, p.77) argues that this allows more control by removing from rural people the ability to oppose state policies. In the field of education I have already noted the difficulties with attempts to introduce markets in job allocations for graduates (Chapter 3, pp.53-5), and a wider job market for all workers. Let me now examine how control is exercised to allow planning in the distance learning systems.

Both the RTVU and correspondence education are subject to planning quotas for admissions of students, although there is a degree of decentralization of this. Central

government has no reason to exercise this control as it takes no responsibility for job assignment. The kind of pressures associated with excess graduates bears on employers and local education authorities, not central government. Thus control is exerted at this level, reinforcing a point made earlier about national statistics aggregating many such local decisions.

For the self-study examination system provincial and lower levels of government have to make provision for students, even if only at the basic level of examination halls, but they have no control over participation. Thus planning is made difficult because no intake quotas are set, nor is there any approval procedure required for students to go through, a point noted with regard to open entry.

In Chapter 9 (p.335) I discussed the need for local government to rationalize to make better use of resources, and allow for example the capitalization of the use of television in all the systems. It applies equally to the problems of duplication of facilities within the RTVU. These are both attempts to improve cost effectiveness, which I will argue in the next section does not guide all their decisions.

A LOST OPPORTUNITY

I shall argue that the desire to control quality viewed as academic standards, and to control planning, has led to the situation described earlier where the promise of the distance learning systems is not fulfilled. In particular they directly affect the learning, access and cost effectiveness, and indirectly economic development.

One interpretation of the lack of development of learning materials and use of media might be that despite their rhetoric the staff in these institutions do not yet appreciate the needs of distance learning. For example, they may still hold to the traditional central role of a teacher (Lo, 1978), that 'learning materials' cannot replace.¹³ However, it is the central government's control of academic standards, based upon conventional models of quality, that in my view lead to a stifling of learning. This is manifest in television hours for the RTVU being equivalent to a conventional lecture series, and therefore being defined by the State Education Commission in the requirements for its courses. Similarly

in correspondence education the equivalence of parallel conventional courses is applied, and encourages increases in face-to-face contact to maintain equivalence. Such controls over quality ignore the nature or indeed the quality of the learning process. The situation in the self-study examination system is the most extreme with the learning process being the one element ignored in the regulations.¹⁴ These views stand in stark contrast to those from the legacy of Mao (Chapter 2, pp.9-13), and indeed they were introduced to counter the decline in quality that occurred during the Cultural Revolution.

In a similar way the concern to control planning affects access in terms of denying open entry in the RTVU and correspondence education. The conflicts of, on the one hand the need to plan admissions and maintain the quality of input, and on the other allowing open entry, is ignored in the self-study examination system, but not in the other two systems. For the self-study examination system quality is defined as the quality of output ignoring entirely the process of learning, even at the expense of high failures. My explanation for this is that the government sees the self-study examination system as a low investment, and hence not an open-ended expenditure commitment.

It is difficult to understand why the government did not capitalize upon the promise of cost effectiveness of distance learning. Graduates of the conventional system exhibit a number of problems in matching the needs of the economy, and indeed in their political attitudes. Distance education graduates appear to be better in many respects (e.g. their level of qualification and practical orientation). Yet the government has shifted its policy away from diploma education through distance learning. It is thus undermining the considerable investment in facilities and infrastructure only some of which can be used in the new programmes. This can only be explained in terms of the over-riding concern with a restricted view of quality, drawing on conventional universities and the desire to control the graduate output.

However, it is not all black in relation to future developments. It may be that the distance learning systems adapt well to the new target groups, and individually deal with a particular group (e.g. the RTVU with secondary vocational, the self-study examination system with professional education, and correspondence education with diplomas and

degrees). In my view the integration of the systems offers the best prospect of fulfilling the promise of the distance learning.

NOTES

1. This change stemmed from a realization that the basis of estimates of needs of the economy were too high and later led to less ambitious targets.
2. It is, however, true that the RTVU wanted to stop 'free viewers'.
3. Developments in the satellite technology that China uses will of course overcome this eventually (Chapter 6, p.189).
4. But there were no data for 1989 & 1990, the crucial years of change.
5. This evokes the two factors determining success proposed by Daniel (1983, p.19): that a distance learning system should have a direct connection with its students, and that there should be a relationship between students and institutional income.
6. A situation that would make Robinson (1991) lament even more, given the fact that adult education was the only part of Chinese government policy that for her seemed to show any interest in equality.
7. Using the predictions in Table 4.4 adult education would fall relative to conventional higher education (48% compared to the current 95% - see Table 8.13).
8. There is an element of 'double counting' in my discussion, as I earlier talked about this capacity being used to absorb those who fail the higher education entrance examinations and intend to study diplomas and degrees.
9. For example, the learning experience is likely to develop in a more positive way through the improvement in the use of the various teaching media.
10. A recent article from an official in the Comprehensive Reform Experiment Department of the State Commission for the Restructuring the Economic System discussed the separation of central and local authority considering economic, social and cultural responsibilities (*FBIS JPRS-CAR-90-002*, pp.3-10). Zhou (1989, pp.163-79) explores it in the context of educational policy.
11. *FBIS JPRS-CAR-90-002*, pp.3-10.
12. There was an example of a student who wanted to improve his English and sent for material from a company that advertised nationally, and quoted a national registered patent number for the material. All that he got was a plastic box with six sheets of material worth 2 yuan, for which he had paid 13 yuan! Writing to the *Zhongguo jiaoyu bao* to complain he wanted such acts punished (No.417, 16 July 1987, p.4).
13. I have already noted how they mimic conventional education in creating facilities to resemble conventional colleges (e.g. Chapter 6, p.36).
14. Only very general definitions about learning materials are covered in the regulations (Chapter 8, p.271-2).

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APPENDICES

Appendix 1 Research Methods and Data Sources

Appendix 2 Television Teachers' College programmes

Appendix 3 RTVU Complete National Statistics 1979-1989

Appendix 4 Analysis of RTVU Printed Texts

Appendix 5 Analysis of Selected RTVU Television Programmes

Appendix 6 Analysis of Self-Study Examination System Material

APPENDIX 1 RESEARCH METHODS AND DATA SOURCES

INTRODUCTION

This appendix sets out the methods of research, data sources and the timescale over which the research was conducted.

The material for this research has been collected over a long period of time, starting formally in 1982, but initially in 1979, on my first visit to the Central Radio and Television University while on holiday in China. Data collection started with visits in 1981 and 1982, and was focused on the Radio and Television Universities. Later this was expanded to take in the general context and other types of distance learning institutions through documentary searches largely from Chinese sources, both in Chinese and in translation.

Some of the data collected up to the summer of 1983 has already been published (McCormick, 1982; Hawkrige & McCormick, 1983; McCormick, 1985 & 1986). This data will be treated as secondary source material for the purposes of this thesis (apart from McCormick, 1985 & 1986), although of course it greatly influenced my conception of the issues in a way that is difficult to acknowledge. In particular these visits and the associated research on documentary sources gave rise to a series of major categories and sub-categories, which were subsequently used in the documentary analysis.

In the sections that follow details are given of the way data were collected and of the particular sources of that data.

VISITS TO CHINA

Sites visited and work undertaken

1979

As noted above this visit was undertaken while on holiday in China in May 1979. It was a brief visit in which I met two senior staff of the CRTVU and some of the staff of the Central China Television associated with the RTVU. An initial meeting, in which they largely quizzed me about the Open University, was followed by another with three staff of the RTVU. This meeting headed by the late Wang Zunhua (who was later to become a good friend), gave me the opportunity to systematically interview them about the nature of the RTVU. The information from this visit was published in McCormick (1980) and none of the data are used in this thesis.

1981

This visit was as part of a British Council sponsored workshop programme for RTVU staff on distance education. During this time I, along with the two other 'foreign experts' running the workshop, was able to informally find out more about the RTVU and also to 'interview' senior and specialist staff (such as print editors and staff in the RTVU and Central China Television television studios). This was augmented by a visit to Fang Tai Bridge Factory in a suburb of Beijing, which had a study centre of the Beijing PRTVU. The staff of the Beijing PRTVU, head of the centre and his staff were interviewed and some leaflets taken. Also a brief inspection of the centre was made, but, although classes were visited, no observations or interviews of students were possible. A report was produced which gave our collective view of the RTVU (Neilson, McCormick & Dunkling, 1981), and some information was published in McCormick (1982).

1982-1983

This was an extended period in China working for the CRTVU providing advice and a seminar programme on distance learning methods. I was based in the CRTVU, but it was difficult to get access to other than a small circle of people, not least because my spoken Chinese was inadequate. During that time I spoke informally to staff, and in particular had many conversations with Professor Wang Zunhua. In addition I had access to some teaching plans and a copy of the World Bank loan proposals on the RTVU which were being drawn up at the time. At that time I did not systematically collect information on the subject of the thesis, though I did get quite a lot of background information.

During the ten months in China I visited three provincial RTVUs: Jiangsu PRTVU, in Nanjing (January, 1983); Guangdong PRTVU, in Guangzhou and Foshan Branch School (June, 1983); Yunnan PRTVU in Kunming and a nearby factory-run RTVU workstation (June, 1983). In Nanjing I interviewed senior staff and visited a district branch school and two factory-run workstations (study centres). Again I interviewed staff and students at the centres and looked round the facilities. In Guangdong I managed to spend several days at one local authority-run Branch School (Foshan) to trial some material. So in addition to interviewing provincial, district and workstation staff, I interviewed students. The CRTVU staff also administered their own questionnaire which I subsequently analysed. This visit to Foshan was the subject of a publication (McCormick, 1985), and will be drawn on as primary source material in this thesis. The visit to Yunnan included an interview with the provincial director of adult education, who was acting president of the Yunnan PRTVU, and a visit to the Kunming Iron and Steel Plant which ran several RTVU classes.

1990

This involved visits to Nanjing, Hangzhou and Beijing to the Jiangsu PRTVU, Zhejiang PRTVU, Hangzhou MRTVU, Xiaoshan Branch School, Zhejiang PEC, Hangzhou University, Zhejiang Audio-visual Centre, the Television Teachers' College (Beijing), and CRTVU (Beijing). It also included interviews with staff of the Teachers' Education

Department of the State Education Commission, and Professor Zhou Jianshu retired director of the Correspondence Education Institute of the Chinese People's University.

Methods employed

As indicated in most of the visits interviews were conducted, and at the time focused on trying to understand the structure and operation of the distance learning systems. Issues emerged, but it was not until analysis had been done in 1983 that they started to form as a basis for the thesis. Thus it was not possible to follow up these issues through direct interviews until the 1990 visit. In addition for correspondence education and the self-study examination system I had (in 1990) to collect basic data on their operation that were not available through published sources. I used a framework for interviews that was drawn from that used in McCormick (1982), which derived from the editors' brief (Rumble & Harry, 1982). In the case of the RTVU I focused upon changes that had taken place since my last visit.

The interviews with students at Foshan were quite different. The following is what I said in McCormick (1985, pp.86-87) about the description of the investigation and the conditions of the interviews:

Four basic groups were investigated: the eight students who had studied the learning package (1980 intake electrical engineering major); the whole class of the 1980 electrical engineering intake; the whole class of the 1982 electrical engineering intake; the tutors of the branch school. The first group was to be questioned about the learning package and general views on the RTVU, and the other two student groups were only questioned on their general views on study. The tutors were asked about their general and, for those who had studied it, their [specific] views on the learning package. Both group interviews and a questionnaire were administered. The students who had studied the material were interviewed in two groups of four students, using a semi-structured approach, i.e. with a list of topics which would be dealt with, having first allowed the students to respond to general questions with a minimum of prompting. The questions tried to follow the students' responses, although there was insufficient time for detailed probing. The interviews lasted about two hours. The questionnaire was given to the 1980 and 1982 intakes [...] and they were given two days to complete it. Students were not required to identify themselves. These classes were then interviewed as separate class groups for about two hours [...] it being conducted very much as an unstructured interview, students simply being asked to give their views on the RTVU. An effort was made to involve as many students as possible by repeatedly asking those who had not said anything to speak. The group who studied the learning package were observed watching the TV programme and listening to the audiotape. [...]

The branch school was selected because it was considered a good one, both in terms of facilities and students' results (in examinations). The eight students chosen to study the [trial] package were good students, indeed two were the best students in their intake [...]

The conditions for the interviews were such that, in addition to students and the two principal interviewers [myself and my wife, as interpreter], several others sat in. Some of these included senior staff from the Provincial RTVU as well as the branch school. At one point while interviewing four

students who had studied the learning package there were an additional seven people 'in attendance'. However, the students in all cases appeared to be uninhibited in their responses, one even commenting negatively upon the local newsletter. Only on one or two occasions did those in attendance make a comment, either in response to a student remark or a question to students. Thus, although it seems likely that these observers would cause some reactivity, there is no real evidence to suggest it had a large effect. The questionnaires, although not revealing the students' identity, were looked through carefully by the branch school staff. Not all the questionnaires were received, with only nine of the 1980 intake and 10 of the 1982 intake being available for analysis. This represents a less than 50 per cent response rate, and again the replies must be treated with caution.

Observations while on visits were unstructured and mainly confined to looking at the facilities and conditions of the buildings etc. Although classes were visited, all study stopped and no opportunity was afforded to watch tuition or indeed students viewing television programmes, except during the trial of material in Foshan.

CHINESE SOURCE MATERIAL

This material falls into two basic categories, English-language translations and Chinese-language sources. Both were searched using the categories identified below from the original publications, with one or two exceptions that will be explained later. These exceptions utilized indexes and computer searches.

The set of categories for searches of all documentary sources (Chinese and secondary English language) were as follows:

- Adult Education
- Workers Education*
- Education, general
- Higher Education
- Content of Courses*
- Education and Economic Development
- Employment
- Job Allocation (university graduates)
- Infrastructure (e.g. radio and television facilities)
- Open Broadcasting
- Correspondence Education
- Self-study
- Radio and Television Universities.

(Those marked with an asterisk proved not to be sufficiently unique, and were subsumed under other headings.) Within each category there were various sub-categories to allow a more detailed coding and analysis.

The translations were used particularly for Part 1 of the thesis, and as a back-up for the Chinese language sources.

English language translations

These consisted of the *Summary of World Broadcasts (SWB) Part 3: The Far East*, produced by the BBC at Caversham, and the *Foreign Broadcast Information Service (FBIS)*, produced by the Joint Publication Research Service, U.S. Government, Washington D.C.

SWB was searched manually covering the years 1979 to 1984 (i.e. looking at the index for each day), and by computer from 1982 to September, 1989. From September, 1989 to the current issues a manual search was made. *FBIS* was searched manually covering the years 1979 to the current issues.

All items selected were photocopied or notes taken and subsequently they were entered into a microcomputer database (*dBASE III Plus*), with suitable coding against the above categories. For the years 1979 and 1980, for both sources, only the items relating to particular aspects of general information and to the distance learning systems covered in Part 2 of the thesis were selected for entry onto the database.

Chinese language sources

General

These sources covered general and specialist (i.e. educational) newspapers, specialist journals (educational, economic and general social science), and books and reports. The newspaper and journal sources consulted were based on what was available in SOAS and the British Library, and one or two that could be ordered directly from China. The books and reports were those obtained fortuitously through people who had visited China, on my visits to China, and from contacts in China who sent material. Dates of issues searched are given for each, and where a year is given all issues in that year have been searched.

Newspapers

National

Guangming Ribao 1979-1988 (using the index *Guangming Ribao Tansuo*).

Renmin Ribao 1979-1988 (using the index *Renmin Ribao Tansuo*).

Zhongguo Jiaoyu Bao November 1983-1991.

Zhongguo Qingnian Bao ('China Youth Gazette') 1983 Jan-June.

Local

Beijing Ribao 1982 Nov-Dec (partial), 1983 Jan-May;

Beijing Wanbao 1983 Feb-May;

Liaoning Ribao 1983 April-June;

Nanfang Ribao 1979-1980, 1981 July-Dec, 1983 Jan-June;

Wenhui Bao 1979-1982, 1983 Jan-Aug;

Xinhua Ribao 1980 March-Dec, 1981, 1982 Jan-March & July-Dec, 1983 Jan-April;

Yunnan Ribao 1983 Jan-July.

Journals

These covered several types: national education journals; other national social science journals; national collections of journal articles (by *Renmin Daxue* - the Peoples University); university and college journals; provincial education journals; local magazines.

1 National Education Journals

Beijing chengren jiaoyu 1990 7-12, 1991 1-8 10-11.

Chengren gaodeng jiaoyu yanjiu 1985 2, 1987 1-5.

Dianhua jiaoyu 1982-1986, 1987 1-4, 1988 1-3, 1989 1-6 (said to have discontinued by the UK supplier, but apparently available in China).

Jiaoyu yanjiu 1979 April, 1980-1987, 1988 Jan- Aug.

Jiaoxue yu yanjiu 1979 1-3, 1980-1982, 1983 1-4, 1984-1987, 1988 1-4, 1989.

Renmin jiaoyu 1979-1981, 1983 Jan-July.

Zhongguo gaodeng jiaoyu 1990, 1991.

Zixue (formerly *Rencai*) 1982 3-10 & 12, 1983 1-7, 1984-1985, 1986 1-11, 1987 2-7, 1988 1-5, 1989 1-7 (discontinued).

There are other journals not available in the UK, and more central to distance learning (e.g. *Xiandai yuan juli jiaoyu*),¹ some of which are included in the sources in No.3 below.

2 National Social Science Journals

Jingji wenti tansuo 1981-1983, 1987, 1988 1-6, 1989 1-11.

Xinli xuebao 1979-1983, 1984 1-3;

Zhongguo jingji wenti 1983 1-3

Zhongguo shehui kexue 1980-1984, 1985 1-3, 1987, 1988 1-5, 1989.

3 *Renmin daxue: fuyin baokan ziliao* (duplicated periodical material by the Chinese People's University)

These are a series of volumes, published monthly and bimonthly, that reproduce articles from journals throughout China. This gives access to national and local journals that are not available outside China or cannot be obtained in the UK (e.g. *Chengren Gaodeng Jiaoyu* - 'Adult Higher Education'). There are several volumes on education and the following have been searched:

Daxuesheng 1979

Gaodeng jiaoyu (before 1986 called *Daxue jiaoyu*) 1981-1983, 1984 7-12, 1985 1-2 4-5 7-12, 1986 1 3-7 9-12, 1987, 1988 2-3;

Jiaoyuxue 1981 1, 1983, 1985-1987, 1988 2;

Zhigong jiaoyu yu qita leixing jiaoyu 1985, 1989; 1991 2 & 3.²

4 Government Publications

There are only two regular publications: *Zhonghua Renmin Gongheguo guowuyuan gongbao* (*PRC State Council Bulletin*), and *Zhongguo jiaoyu bu*, but only one has been searched:³

Guowuyuan gongbao 1980-1982, 1983 1-26, 1984 6-11 13 15-30, 1985 1-36, 1986 1-35, 1987 1-30, 1988 1-18.

5 University and College Journals

Many colleges in China publish journals, which in the main deal with general and higher education, rather than adult education. Those searched are:

Beijing daxue xuebao 1978 1-2, 1980 2-3, 1983 1-4;

Beijing shifan daxue xuebao 1981-1983,⁴ 1984-1987, 1988 1-4;

Dianshi daxue 1982 1-5, 1988 7-8 11-12, 1989 1-2 4-5 7-12, 1990 1-2 (1988-1990 issues called *Zhongguo Dianshi daxue*).

Fudan daxue xuebao 1978 1-2, 1979-87, 1988 1-4;

Guizhou shehui kexue 1981 2-6, 1982-1986, 1987 1-7 9-12, 1988 1-6 8-9;

Hangzhou daxue xuebao 1981 2-4, 1982-1986;

Hebei shifan daxue xuebao 1982, 1983 1-3, 1984-1985, 1987-1988;

Heilongjiang <<Qiushi xuekan>> 1981 2;

Huanan shifan daxue xuebao 1981 2-4, 1982-1985, 1986 1 2 4, 1987, 1988 1-3;
Jilin daxue xuebao 1979-1983;
Jinan daxue xuebao 1981 2-4, 1982- 1987;
Lanzhou daxue xuebao 1983 3;
Nanjing daxue xuebao 1976 1 2 4, 1977-1986, 1987 2, 1988 1-3;
Nanjing shiyuan xuebao 1981 2-4, 1982-1987, 1988 1-3;
Nankai daxue xuebao 1980-1981, 1982 1, 1983 1-3, 1984-1987, 1988 1-5;
Shanghai shifan xueyuan xuebao 1983 2;
Shanxi daxue xuebao 1982- 1985, 1987-1988;
Shanxi shiyuan xuebao 1981- 1988;
Sichuan daxue xuebao 1982-1983, 1988;
Tianjin shida xuebao 1975, 1 2 5, 1976-1977, 1978 1-4, 1979, 1980-1983, 1986, 1988 1-3;
Xiamen daxue xuebao 1980-1988;
Xibei sheyuan xuebao 1982-1987, 1988, 1-3;

It must also be remembered that the sources under No.3 also give access to these and other college journals.

6 Local magazines

There is only one that I have searched, being copies given to me in Zhejiang Province:

Zhejiang zixue kaoshi 1986-89, 1990 1-3.

Books and reports

Four major kinds of material are available: general books (or year-books) on education; books on self-study; books and material from the RTVU; books and reports on correspondence education. These are listed below:

1 General books

Zhongguo gaodeng jiaoyu shi, Neng Mingan (ed), Chongqing, Chongqing Chubanshe, 1983.

Zhongguo jiaoyu (1949-1982), Yao Ruobing, Hong Kong, Huafeng Shuju, 1984.

Zhongguo jiaoyu gaikuang (yi), Zhonghua Renmin Gongheguo Jiaoyubu Waishiju Bian, Wuhan, Wuhan Daxue Chubanshe, 1985.

Zhongguo jiaoyu nianjian 1949-1981, 'Zhongguo jiaoyu nianjian' bianjibu, Beijing, Zhongguo Dabai KequanShu Chubanshe, 1984.

Zhongguo jiaoyu nianjian 1989, 'Zhongguo jiaoyu nianjian' bianjibu, Beijing, Renmin jiaoyu chubanshe, 1990.

Zhongguo jiaoyu chengjiu: tongji ziliao 1980-1985, Beijing, Zhonghua Renmin Gongheguo Guojia Jiaoyu Weiyuanhui Jihua Caiwu Si, 1986.

Zhongguo jiaoyu jihua nianjian 1988, Guojia jiaoyu weiyuanhui jihua jianshisi bian, Beijing, Beijing gongye daxue chubanshe, 1989.

2 Self-study

Gaodeng jiaoyuxue (shangce), Gang Maoyuan (ed), Fujian, Renmin Jiaoyu Chubanshe & Fujian Jiaoyu Chubanshe;

Shanghai shi gaodeng jiaoyu zixue kaoshi shiti Ji cankao da'an, Shanghai Shi Gaojiao Zixue kaoshi Weiyuanhui Bangongshi Bian, Shanghai, Shanghai Jiaotong Daxue Chubanshe, 1983

Yingyu (English), *zhongji ban diyice*, Jiangsu Sheng Yeyu Yingyu Guangbo Jiangzuo, Nanjing, Jiangsu Renmin Chubanshe, 1976.

Zixue fangfa yu Jineng, Yu Cheng, Hebei Renmin Chubanshe, 1983.

Zixue yu chengcai (cengding ben), Hunan, Hunan Kexue Jishu Chubanshe, 1981;

Zixue de aomi (to accompany series of radio programmes called *Qingnian Zhi You*), Beijing, Zhongyang Renmin Guangbo Diantai Qingnian Zubian, Guangbo Chubanshe, 1982;

3 RTVU material

Apart from the internal documents (mainly teaching plans) mentioned in the section under visits to China, I have collected some published materials:

Daxue fudao cailiao, 'Supplementary' tutorial material for a variety of subjects (e.g. physics, chemistry, maths, English, electronics, mechanics) issued by the RTVU to all students; these are mainly for 1979 and 1980.

English Book 1 & 2; English Reader Book 1, Chenlin (chief editor), Guangbo Dianshi Waiyu Jiangzuo Shiyong Jiaocai, 1980;

Kongzhi gongcheng jichu (Shang, xia), (translated from an OU course - Basic Control Engineering), 1982.

Quanguo guangbo dianshi daxue xitong jiaocai bianxie jiangxi hui, (from recording of sessions) Zhongyang Guangbo Dianshi Daxue Jiaocai Chu & liaoning Guangbo Dianshi Daxue Bianji Bu (joint editing), Shenyang, 1986.

Zhaosheng shiti ji jieda (1982-1985), Qanguo Guangbo Dianshi Daxue (RTVU), Tianjin, Tianjin Jiaoyu Chubanshe, 1985.

Zuopin xuanjiang (yi), Beijing Guangbo Dianshi Daxue, Beijing, Beijing Chubanshe, 1982;

Gailu tongji jiangyi, Chen Jiading, Liu Wanru & Zhu Renguan (eds.), Beijing, Guangbo Dianshi Daxue jiaocai, 1980;

4 Correspondence education

All of the following material is from Tongji University, Correspondence Department, Shanghai, unless otherwise stated:

Gongke gaodeng hanshou jiaoyu de jiben jingyen, 1984;

Hanshou jiaoyu wenjian huibian, 1984;

Hanshou jiaoxue, Tongji Daxue Yeyu Jiaoyu Chubian, 1984;

Hanshou xinsheng zhunbei zhou ziliao huibian, 1983;

hanshou, ye daxue jiaoxue jihua (undated but around 1981);

Shiji gaodeng hanshou jiaoyu gaiguan, 1985.

Zhongguo renmin daxue hanshousheng xuexi guicheng zhixing guiding, Beijing, Zhongguo Renmin Daxue Hanshou Xueyuan Jiao Fuchu, 1983.

Specific references are made to some of these in the thesis.

WORLD BANK PROJECT DATA

Reports

There are a number of internal reports from the Television Universities\Polytechnics Project that are written by overseas consultants who visit or who run workshops etc., as well as some documents prepared as background to the Project. Some of these are confidential. Reference is made to these in the text in the usual way.

Survey data

Two major surveys, one for the Polytechnics and one for the RTVU, were carried out as part of the funding from the World Bank, and with technical assistance from overseas experts. These involved questionnaires to graduates of both institutions and to their employers. Some of the information from these surveys has been reported in English. I have obtained them through the overseas experts involved in helping with the analysis. The Chinese versions were 'unavailable', and, although I have had no direct access to the original data, I have seen some of the raw and unpublished tables.

SECONDARY ENGLISH LANGUAGE SOURCES

Published material

Journal contents manually searched

The following journals have been systematically searched:

Britain-China 1988-9;

Bulletin of Concerned Asian Scholars 1980-1987, 1989 21 (1);

Chinese Education 1972/3 (Vol.5)-1989 (Vol.22, No.2);

Comparative Education

Comparative Education Review

Compare

Issues and Studies

Journal of Asian Studies

Modern China 1978-1979 Vol.15, No.3;

Prospects

The China Quarterly 1972-1989

Computer searches

These have been carried out a number of times over the period of the research and give access to articles in journals which do not usually carry articles on China. The databases searched were:

ERIC
PAIS International
Sociological Abstracts
NTIS
US Political Science Documents
Social Scisearch
Historical Abstracts

A variety of search strategies were tried with the most general one using the following key words:

China/Chinese, Education?/College?/Teaching/Universit?

(The question mark indicates a truncation.)

In fact these searches revealed very few significant articles, although many with useful statistics.

Unpublished reports

These consist of reports by overseas visitors to China, in addition to those that form part of the World Bank Project. They include reports I wrote as part of my attachment to the CRTVU in 1982-1983. The reports available are:

BERNBAUM, G. *et al* (1985) *British delegation for teacher education (Sino British cultural exchange programme 1984/86, and preparation for the World Bank loan to China for improvements in teacher education)*, London, British Council.

HAWKRIDGE, D. (1984) *Notes on visits to Chengdu PRTVU, Chengdu College, Beijing College of Economic Management, Xi'an Junior College, Xi'an PRTVU*, Milton Keynes.

HAWKRIDGE, D. (1984) *Notes on the seminar in Kunming, October 11-25*, Milton Keynes.

McCORMICK, R. (1981) *China's Central Broadcasting and Television University: comments and recommendations*, Milton Keynes, Report to the British Council.

McCORMICK, R. (1983) *Report on attachment to Central Radio and Television University, People's Republic of China, September 1982-July 1983*, Milton Keynes, Report to the British Council.

McCORMICK, R. (1983) *The Radio and Television Universities of China*, Milton Keynes, Confidential report to the CRTVU.

NEILSON, B., McCORMICK, R. & DUNKLING, L. (1981) *Report of a workshop on distance education held in collaboration with the Central Broadcasting and Television University, Beijing, China, 12 March to 27 March 1981*, London, British Council.

OPEN UNIVERSITY (1987) *Report of delegation from the Open University, UK to Zhejiang Province Education Commission and ZTVU, April 1987*, Milton Keynes, Open University.

YOUNG, (Lord) (1979) *Notes of a visit to the RTVU* (no source).

Theses

Theses were located by searching the University Microfilm International China catalogues (up to December 1990), and Dissertations Abstracts International (1989-90).

Notes

1. I have four issues (in 1990 & 1991) of this journal that were sent by colleagues in China.
2. In the event this proved to be the most useful journal for distance learning institutions and for adult education in general. It reproduces articles from most of the leading adult education journals, and provides an index of articles in other less well known and local ones. Unfortunately few copies of the *Renmin Daxue* collection (code G5) are available in the UK and I have been unable to get back issues from China or indeed to reliably get current issues. No British library stocks this particular journal.
3. 1980-1982 was an incomplete search; 1983 also had a selected index search; 1984-1986 were also searched through *FBIS*, where the contents page of each Bulletin is translated, along with selected items.
4. These have not been searched thoroughly.

APPENDIX 2 TELEVISION TEACHERS' COLLEGE PROGRAMMES

The following were the programmes scheduled for transmission on 3-9 November 1990 on Channels 1 and 2 of CETV.

Channel 1

Monday

6.00	Skating 1
6.52	Higher Maths (37-39)
9.27	Inorganic Chemistry (37-39)
12.02	Chinese Writing (English) 25-26
13.45	Comprehension Course (English) 25-26

Tuesday

6.00	Skating 2
6.52	Ancient Chinese History 37-39
9.27	An Introduction to the Earth 37-39

Wednesday

6.00	Skating 3
6.52	Contemporary Chinese Language 27-28
8.35	Contemporary Chinese Literature 27-28
10.18	Logic 14
11.10	Higher Mathematics (Physics) 79-81
13.45	Botany 40-42

Thursday

6.00	Skating 4
6.52	Higher Mathematics (Physics) 82-84
9.27	Important Works of Chinese History 27-28
11.10	Inorganic and Analytic Chemistry (<i>sheng</i>) 40-42

Friday

6.00	Skating 5
6.52	Higher Geometry 27-28
8.35	Higher Algebra 91-92
10-18	Probability Theory and Mathematical Statistics 27-28
12.02	College English Intensive Reading (elementary introduction) 7-8
13.45	Keyboard and Harmony 114-115

Saturday

6.00	Martial Arts (<i>wushu</i>) 29
6.52	Basic Geology 43-45
9.27	Philosophy (Political) 36-38
12.02	Introductory Law 22
12.54	Vocal Music 15
13.45	College English Intensive Reading (3) 43-45

Sunday

6.00	Martial Arts (<i>wushu</i>) 30
6.52	Useful English Grammar 15
7.44	General Reading (English) 8
8.35	Foreign Art History 22
9.27	Oil Painting 29-30
11.10	Literary Sketch 5
12.02	Solfeggio 59

Channel 2**Monday**

19.15	Basic Natural Science 32-33
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Tuesday

19.15	Algebra and Elementary Functions 154-155
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Wednesday

19.15 Literary Selections and Exercises (1) 34-35

Thursday

19.15 Literary Selections and Exercises (4) 34-35

Friday

19.15 Geometry 27-28

Saturday

19.15 Selected Works and Exercises (1) 36

20.08 Basic Natural Science 35-36

Sunday

19.15 Secondary and Primary School Principals Management 29-30

APPENDIX 3 RTVU COMPLETE NATIONAL STATISTICS 1979-1988

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	TOTAL
Admissions by Faculty¹											
Humanities											
All course ²	0	2459	72	131181	14157	93359	392082	13802	30660	73342	751114
Single course	0	0	0	8907	0	27	43951	338	1485	9212	63920
Total	0	2459	72	140088	14157	93386	436033	14140	32145	82554	815034
School leavers ³	0	0	0	0	0	0	0	0	0	0	0
Engineering											
All course	121804	95238	0	92673	5277	137342	4230	63803	44700	37121	602188
Single course	1336	2903	0	245	1328	3861	0	592	1007	2570	13842
Total	123140	98141	0	92918	6605	141203	4230	64395	45707	39691	616030
School leavers ²	0	560	0	0	0	0	0	0	0	0	560
Economics & Management											
All course	0	0	6479	1986	266839	1455	19627	143757	71324	97835	609302
Single course	0	0	0	0	24308	0	0	2648	3786	14065	44807
Total	0	0	6479	1986	291147	1455	19627	146405	75110	111900	654109
Total school leavers	908	6771	0	963	2883	7260	6000	30105	28983	28468	112341
Other	5270	0	0	5769	0	1513	6341	363	721	4607	24584
TOTAL	128410	100600	6551	240761	311909	237557	466231	225303	153683	238752	2109757
Summary of admissions											
Complete course	127413	101678	6551	241553	309569	236923	466877	225728	153284	242037	2111613
Single course	198883	100073	7707	91562	86147	116403	117702	40724	100338	189447	1048986
Total	326296	201751	4258	333115	395716	353326	584579	266452	253622	431484	3160599
School leavers	550	8993	0	991	3188	8031	7883	35527	35949	38630	139742
Graduates											
Humanities	0	0	0	2472	50	1821	129679	65820	78965	221299	500106
Engineering	0	0	0	99834	80758	305	70413	2700	107725	5956	367691
Economics & Management	0	0	0	0	0	357	4689	245410	9468	95621	355545
Teacher training	0	0	0	2959	0	131	1686	0	6832	0	11608
Medical	0	0	0	2408	0	0	0	2204	0	0	4612
Total	0	0	0	107673	80808	2614	206467	316134	202990	322876	1239562
School leavers	0	0	0	250	8165	0	923	2695	6322	22148	40503
Non-diploma											
Inservice training	1115	2626	2551	1754	2808	3591	2579	36393	209911	234377	497705
Continuing education	0	0	0	0	0	0	1360	6696	53347	40794	102197
Specialized certificate	45	0	0	47	731	0	535	1535	7441	33070	43404
Total	1160	2626	2551	1801	3539	3591	4474	46124	270579	308241	644686
Secondary vocational											
Admissions	10418	2600	0	0	585	1405	59606	26460	35501	56432	193007
Graduates	0	0	5400	0	0	0	533	3411	12012	39666	61022
Other: single sp. course	38706	46476	45353	84640	82694	120329	103058	95635	102465	135118	854474
science (diploma)									203		203
non-diploma										90	90
law diploma grads										2126	2126

Notes

1. Admissions are reported by (diploma) speciality and these have been assigned to faculties according to CRTVU programmes (Table 6.1). Inconsistencies exist in reporting and hence total 'Admissions by Faculty' and 'Diploma' 'Summary of Admissions' do not match.
2. This figure may include students who are part-time or even spare-time, but spare-time is given as a separate category because it is reported as such by some PRTVUs.
3. This figure is usually given as a total for all faculty programmes, so the most reliable figure is that given as 'Total school leavers'.

APPENDIX 4 ANALYSIS OF RTVU PRINTED TEXTS

Here I want to look at the design of the material to see whether RTVU staff are trying to consciously implement approaches that will support the distance learner. However, given the large amount of material used by the RTVU this can be no more than an illustrative exercise. The texts chosen have been taken from what is available in the bookshops, to cover a variety of subjects, and publishing dates over the period 1980-1988.

First I will consider **learning aids**. These include: a study guide that shows students how to deal with the text; a full contents list that allows students to find their way through the structure of the text; headings and a numbering system that reveal the structure within the text; summaries at the end of sections; an index; a glossary of terms; highlighting important concepts and terms in the text (either typographically - e.g. use of bold - or by a separate section) or providing concept lists or maps. Some would argue that a statement of aims and objectives is also necessary to aid learning, but there is some controversy about these.¹

The following list of course books, in order of publication date, have been examined:

- A *Guilu tongji jiangyi (Probability Statistics Teaching Material)*, (CRTVU), Beijing, Renmin Jiaoyu Chubanshe (People's Education Publishing House), 1980.
- B *Putong wulixue jiangyi (Ordinary Physics Teaching Material)*, Beijing, Zhongyang Guangbo Dianshi Daxue Chubanshe (CRTVU Publishing House), 1984.
- C *Putong wulixue shiyan jiangyi (Ordinary Physics Experiments Teaching Materials)*, Beijing, Zhongyang Guangbo Dianshi Daxue Chubanshe (CRTVU Publishing House), 1986.
- D *Xinxixue (Psychology)*, Beijing, Zhongyang Guangbo Dianshi Daxue Chubanshe (CRTVU Publishing House), 1986.
- E *Xiandai hanyu (Contemporary Chinese Language)*, Zhongyang Guangbo Dianshi Daxue Chubanshe (CRTVU Publishing House), 1988.

These five texts have been examined for each of the learning aids listed above and the results are presented in Table 4A.1 (a cross represents the existence of an aid).

Table 4A.1: learning aids found in a selection of RTVU course texts

<i>Learning Aid</i>	<i>TEXT</i>				
	A	B	C	D	E
Study guide	X		"		
Contents list					
Headings/numbers				X	X
Introductions				X	
Summaries					
Index					
Glossary					
Highlighted concepts:					
typographically			X		
separate section				X	
definitions			X	X	
lists/maps					
Aims & objectives					

Table 4A.1 shows that only a limited range of learning aids are used. However, this may be more to do with the role of these course texts, and the fact that a second kind of text exists that acts as a guide to such course texts. These ‘study guide books’ (*xuexi zhidao shu*) are usually designed to accompany a course text to help students study that text.² A set of five of these ‘study guide books’ have been examined for the use they make of learning aids, although of course they are themselves a learning aid. They all are published in Beijing by Zhongyang Guangbo Dianshi Daxue Chubanshe (CRTVU Publishing House).

F *Zhexue zixue juyao (Philosophy Self-study Main Points)*, 2nd Edition, 1989 (First edition, 1985).

G *Jingji yingyong shuxue (Yi) <<Weijifen>> xuexi zhidao shu (Applied Mathematics for Economics, (One) "Calculus" study guide book)*, 1986.

H *Gongye tongji xuexi zhidao shu (Industrial Statistics study guide book)*, 1987.

I *Sifa wensu xue xuexi zhidao shu (Documents for Administration of Justice study guide book)*, 1987.

J *Shengye qiye caiwu guanli xuexi zhidao shu (Commercial Enterprise Financial Management) study guide book)*, 1987.

Table 4A.2 shows the aids each text has (shown by a cross).

Table 4A.2: learning aids found in a selection of RTVU study guide books for course texts

<i>Learning Aid</i>	<i>TEXT</i>				
	F	G	H	I	J
Study guide		X			
Contents list					
Headings/numbers	X	X	X	X	X
Introductions	X	X			
Summaries					
Index					
Glossary	X				
Highlighted concepts:					
typographically					
separate section			X		
definitions					
lists/maps					
Aims & objectives		X			X

Evidently these are not much better in their use of learning aids, although a glossary (for terms and phrases for each section) is given in text F and aims are given in G and J.

Now let me turn to the second feature of texts that match the study needs of students, namely **typography**. A text needs to be designed so that students can learn from it: it must *enable* students to learn from it (e.g.. have clear typeface, be a convenient size to study); it must make the ideas and concepts *accessible* (e.g.. by showing the structure through headings, by having diagrams and corresponding text close together); it should be aesthetically pleasing to increase motivation to study (e.g. good quality reproduction of type and illustrations). Many features of typographic design contribute to these three aspects and I will only deal with a few of these, and how they are used in CRTVU texts. The features I will consider are page design, typeface style, structure through headings and numbers, and illustrations.

Page design covers both the page size and the layout on the page (the grid). In China page size is expressed through the term *kaiben* and this relates to the number of folds starting with a standard size of sheet (787x1092 mm).³ These sizes roughly correspond to the British A4, A5 etc, with large textbooks being 16 *kai* (A4), and small ones 32 *kai* (A5). Most are in fact 32 *kai*, a preferred size for booksellers (they can keep their shelves at a standard pitch and don't waste space on variable sized books!). To enable learning and to make the text more accessible the larger size can be better because, for example, it allows scanning by students (more of text on two pages), entails less page turning especially when diagrams are used, allows larger versions of complex diagrams, and the book is more likely to stay open when placed on desk. However, large texts require more desk space and can be difficult to carry around for study 'on the move'. The CRTVU uses both sizes, but 32 *kai* is the most common; of the books A-J examined above only one is 16 *kai*. Figure 4A.1 (overleaf) shows an example of a page from text B of size 32 *kai* that would have benefited from being in 16 *kai*. Where the text is mostly characters with little or no illustration then 32 *kai* is probably the most sensible size. Text B is the only example of 32 *kai* (of those examined) that would have been better in 16 *kai*. Text C, the only example of 16 *kai*, uses many illustrations and is intended for use in a laboratory so this format seems sensible. In the many examples of CRTVU texts I have seen there seems to be no clear educational rationale for a particular size of text, as text B illustrates, but I do not have any systematic evidence to definitively assert this.

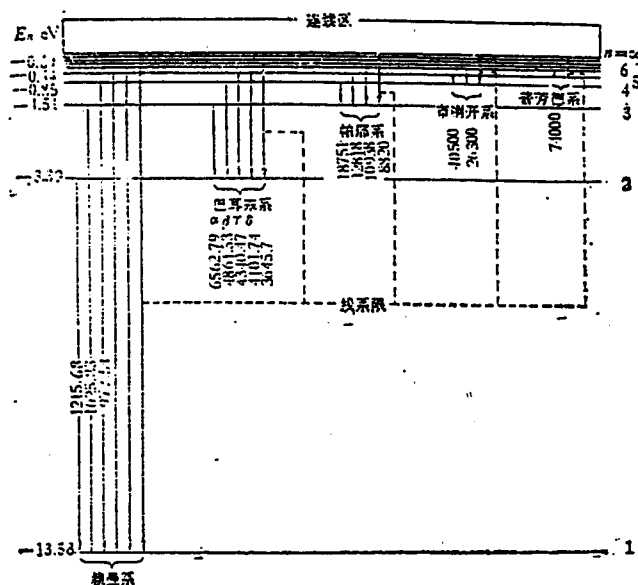


图 20-4

邢系作出合理的解释: 原子在正常状态下处于基态, 其能量最小, 因而是最稳定的。当受到外界的激发(如辐射照射或高能粒子的碰撞、热激发等), 它将吸收一定的能量而跃迁到某一个能量较高的受激态。但处于受激态的原子是不稳定的, 它将自发地跃迁到基态或能量较低的受激态, 同时发射出一个单色光子。从不同的初始状态跃迁到同一末状态时所发出的光谱线是属于同一谱线系的。巴耳末谱线系是氢原子中的核外电子从 $n > 2$ 的各较高能态, 向 $n = 2$ 的能态跃迁时所发射

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Figure 4A.1: example of a 32 kai page that should have been 16 kai (Text B)

The grid used on the page (e.g., the number of columns of text) is always the same in Chinese texts, that is a single full width of text, and I have seen no examples of any other grids in CRTVU course texts.⁴

Typeface styles follow traditional Chinese conventions. The ones that I will consider are the kind (e.g., bold, block, 'italic') and the size of typeface. In addition I will look at centring of paragraphs and indentation of first lines, although these are strictly more to do with page design. As my analysis showed (Tables 4A.1 & 4A.2) headings and numbers are indicated in many of the texts. Within these headings and numbers various sizes of text are used, along with bold characters (see Figures 4A.2 & 4A.3, pp.396 & 397). However, bold or other variations of typeface are not used within a paragraph, for example to emphasise a point or concept. In one case (text A) a smaller typeface is used to indicate portions of the text that can be omitted, especially for self-study, because they are details.

绪 论

学习绪论,要求概括了解什么是哲学和哲学的基本问题,以及从马克思主义哲学的产生和它所实现的革命变革的实践中,着重领会马克思主义哲学是科学的世界观和方法论,明确学习马克思主义哲学的重要性和坚持理论联系实际的学习方法。

教学内容简介

马克思主义包括三个组成部分:哲学,政治经济学和科学社会主义。马克思主义哲学,即辩证唯物主义和历史唯物主义,它是整个马克思主义学说的理论基础,是无产阶级及其政党的科学的世界观和方法论。

第一节 哲学和哲学基本问题

一、哲学是世界观的理论体系

哲学是世界观的理论体系,是理论化、系统化的世界观。

世界观是人们对于整个世界的总的根本的观点。

哲学既是世界观,又是方法论。

哲学的研究对象是世界的普遍本质的普遍规律。哲学是关于自然知识,社会知识和思维知识的概括和总结。

二、哲学的基本问题是物质和意识的关系问题。唯物主义

• 1 •

Figure 4A.2: the use of different size headings and bold to indicate structure

第三章 流动资金管理(上)

一、学习目的要求

流动资金管理是资金管理的重点。因内容较多,分上、下两章讲授。主要阐述流动资金管理的理论政策与方法。通过三、四两章的学习,要求学生着重了解流动资金的概念、管理原则及各项流动资金占用、来源、组成、分类、周转、管理体制,掌握管理各项流动资金的方法,提高流动资金利用效果。

二、学习内容提要

第一节 流动资金概述

要求掌握:流动资金的内容、特点、结构、组成、分类、来源。

(一) 商业流动资金包括哪些内容? 有哪些特点?

商业流动资金包括:商品资金、非商品定额流动资金和结算资金。具有下列特点:

1. 流动性。流动资金在商品流动过程中,在货币资金形态和商品资金形态之间交替的运动。从货币资金形态转化为商品资金形态,再从商品资金形态转化为货币资金形态。不断的循环往复,周转快,周转期短,具有流动性。流动资金不断循

The two conventions of indenting the first line of a new paragraph and of centring equations seem to be standard in all kinds of texts, with indentation following a traditional printing format (one rarely used in English language printing nowadays).⁵ In dense text with equal spacing of lines of characters indentation is a useful device for showing paragraph delineation. But it becomes meaningless and unhelpful for learners in a text with short, one-sentence paragraphs that are common in teaching texts. This is exacerbated when this is used in the larger page size of 16 *kai*, as Figure 4A.4 shows; if all lines are indented then indentation loses its significance. Centring of equations has the effect of taking the eye away from the side of the page when scanning to find significant points or in searching for a particular piece of information, or when skimming to get the sense of the text. It also separates the characters showing the logic of a series of steps from the formulae that make up the steps, with again unnecessary eye movement. Figure 4A.5 (overleaf) shows an example of this.

长度是最基本的物理量之一。大部分物理量的测量最终都归结为长度的测量。例如，水银温度计是用水银柱面在温度标尺上的位置来读取温度的；电压表或电流表也是利用指针在表盘的位置来读数的。因此，长度测量是一切测量的基础，是最基本的物理测量之一。

米尺、游标卡尺和螺旋测微计是最常见的测长量具，它们的测量范围和准确度各不相同。对于更精密的长度测量，要采用其它的方法。

【目的】

1. 学习米尺、游标卡尺、千分尺(螺旋测微计)的使用方法；
2. 学习仪器的读数方法，掌握误差和有效数字的概念，根据误差要求选择测量仪器；
3. 用求算术平均值的方法对多次测量的误差进行估算，正确估计单次测量的误差。

【仪器和用具】

米尺、游标卡尺、千分尺、待测物。

【原理】

对测量仪器的选择：

米尺、游标卡尺和千分尺是具有不同测量精度的测长仪器，测量长度的范围也不同。对于不同的待测对象和精度要求应当采用不同的仪器。

例如，欲测一块长 L 约 120 mm，宽 B 约为 6 mm 矩形平板的面积 S 。为使测量结果的相对误差小于 1%，如何对仪器进行选择呢？

因为

$$S = L \times B$$

Figure 4A.4: an example of the unhelpful use of indentation

$$\frac{\Delta y}{y} = \frac{1}{A} \Delta A + \frac{2}{B} \Delta B + \frac{1}{2C} \Delta C$$

方法三 利用表一中的公式 5, 可直接得到

$$\frac{\Delta y}{y} = \frac{\Delta A}{A} + 2 \frac{\Delta B}{B} + \frac{1}{2} \frac{\Delta C}{C}$$

注意到 $y = \frac{6AB^2}{\sqrt{C}}$, 上面三种方法所得结果是一样的, 即

$$\Delta y = y \left(\frac{\Delta A}{A} + 2 \frac{\Delta B}{B} + \frac{1}{2} \frac{\Delta C}{C} \right)$$

代入已知数据

$$y = \frac{6AB^2}{\sqrt{C}} = \frac{6 \times 325.1 \times (0.282)^2}{\sqrt{4.025}} = 77.32 (\text{kg}^2)$$

$$\begin{aligned} \frac{\Delta y}{y} &= \frac{\Delta A}{A} + 2 \frac{\Delta B}{B} + \frac{1}{2} \frac{\Delta C}{C} \\ &= \frac{0.02}{325} + \frac{2 \times 0.003}{0.282} + \frac{0.005}{2 \times 4.0} = 0.022 \end{aligned}$$

$$\Delta y = \left(\frac{\Delta y}{y} \right) \cdot y = 0.022 \times 77.32 = 1.7 (\text{kg}^2)$$

最后结果表示为

$$y = 77 \pm 2 (\text{kg}^2)$$

在以上各步的运算中, 要注意数字的取舍。

例 II-13

已知 $y = \frac{C^2}{C-A}$, 求相对误差 $\frac{\Delta y}{y}$ 的表达式。

解: 由

$$\begin{aligned} \frac{dy}{y} &= \frac{d(C^2)}{C^2} - \frac{d(C-A)}{C-A} \\ &= \frac{2dC}{C} - \frac{dC}{C-A} + \frac{dA}{C-A} \end{aligned}$$

Figure 4A.5: an example of the unhelpful use of centring

It is of course possible to take issue with this analysis on the basis that there is no empirical evidence to show just what students do at the level of a page for these particular texts. (Indeed it is difficult empirical research.) But my general point is that these texts do not appear to be sensitive to the needs of students who will be studying by themselves, and who, according to the evidence presented earlier, employ strategies of scanning and skimming in an effort to study effectively and efficiently. The typographic design does not set out to help, except in the case of the use of headings (and their associated numbers). Occasionally the propensity to number chapters, sections, subsections and points gets a little out of control and the inconsistency may be unhelpful to a student trying to skim through to get an overall view of the material (see Figure 4A.6 overleaf).

近年来的研究表明，人的视觉的生理机构是一个复杂的网络系统。在这个系统中，从外周神经直到中枢的各级水平不但有纵向的联系，而且还存在着侧向的作用，即同一水平上相邻近的神经元之间能够相互引起抑制作用，这种现象称为侧抑制。侧抑制的发现又把视觉信息传递与分析的研究推进到了一个新的水平。

三、视觉现象

(一) 视觉感受性

1. 对光强度的感受性

在适宜的条件下，眼睛能够觉察到的光的最小强度是很低的，这表明人眼对光的感受性是很高的。实验表明，人眼能对7-8个光量子起反应。通俗地说，假定大气完全透明的话，眼睛能觉察到一公里远的千分之一烛光的光源。这是对光强的绝对阈限。

视觉对光强的差别阈限在中等强度时是符合韦伯定律

的。这时的韦伯分数 $\frac{\Delta I}{I} \approx \frac{1}{100}$ 。但应注意，在光强度很大

时 $\frac{\Delta I}{I} = \frac{1}{167}$ ，在光强度极微弱时 $\frac{\Delta I}{I} = \frac{1}{1}$ ，这时韦伯分数

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Figure 4A.6: an example of an overuse of numbering

Illustrations, both line drawings and half-tones (e.g. photographs), suffer firstly because of the quality of paper, a point I noted in Chapter 5, and secondly because of the quality of illustrators. The quality of paper means that few half-tones are used and when they are they lack clarity, as Figure 4A.7 (overleaf) shows (this photograph is printed on paper of higher quality than normally used). Most line drawings, which make up the bulk of illustrations, are done by printers (not graphic artists attached to the publisher). Less frequently they are done by the author with predictable results. Figure 4A.8 a & b (p.402) shows examples of the kind of illustrations drawn by an amateur, that in one case (a) simply looks bad, and in the other (b) may not be easy for students to follow. Other problems include using inappropriate styles and conventions of engineering drawing (Figure 4A.9, p.403), and putting unnecessary information into the diagram while not showing clearly the crucial information (Figure 4A.10, p.403).⁶

向的波束。因而可以通过运动天线本身来控制发射波束的方向。如何运动天线以及如何精确定出天线的位置，这是控制工程师要解决的问题。

现在我们将要具体考虑一个用于卫星通信天线定位的系统。

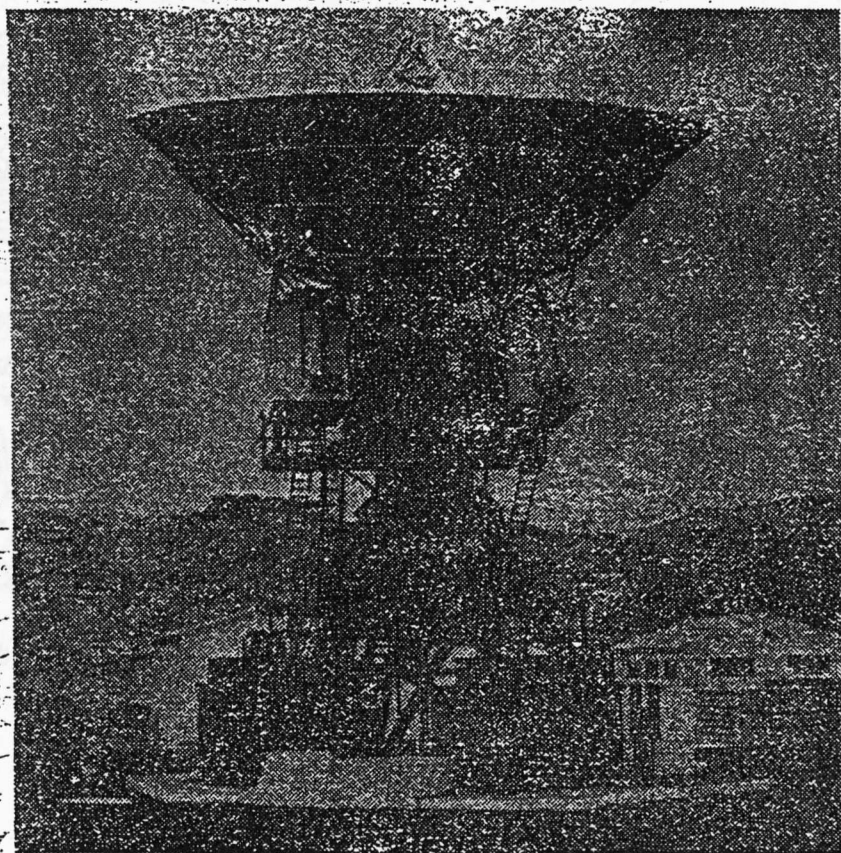


图42—卫星通信天线

在这个系统中，位置控制系统必须使天线准确地对准卫星。卫星被送入保证它总是固定地停留在地面上方的轨道。即使这些所谓‘地向固定’的卫星，位置也稍有变化，所以我们需要有控制系统使通信天线跟踪变化的位置。

图42是一个天线图。这个天线可以绕两个轴转动。它可以上下摆动，也可以转动。每种运动均有独立的控制系统。两个控制系统相类似，因此，我们将只专门讨论一个。我们将讨论绕方向轴转动的控制，这是一个在水平面上确定天线位置的系统。执行机构即转动天线的装置是电动机。图43表示系统的布局。中间有M的圆圈表示电动机。黑白相间的粗线表示电动机轴，箭头表示转动方向。电动机轴驱动传动机构，传动机构画成了第二个圆圈，表示传动比为10000:1。传动机构的输出轴驱动天线支座。驱动电动机的功率来自三角形所表示的电气功率放大器。一个电压加到功率放大器的输入端，就会使得天线绕方位轴转动。

控制系统的目标是保持天线对准卫星。对于直径为13米的这类天线，技术条件将要求天线的角度位置要对准在围绕需求位置大约3角分（即大约 9×10^{-4} 弧度）以内。不管天线是否可能由于风吹而摆动，这个对准精度都要维持。

(a)

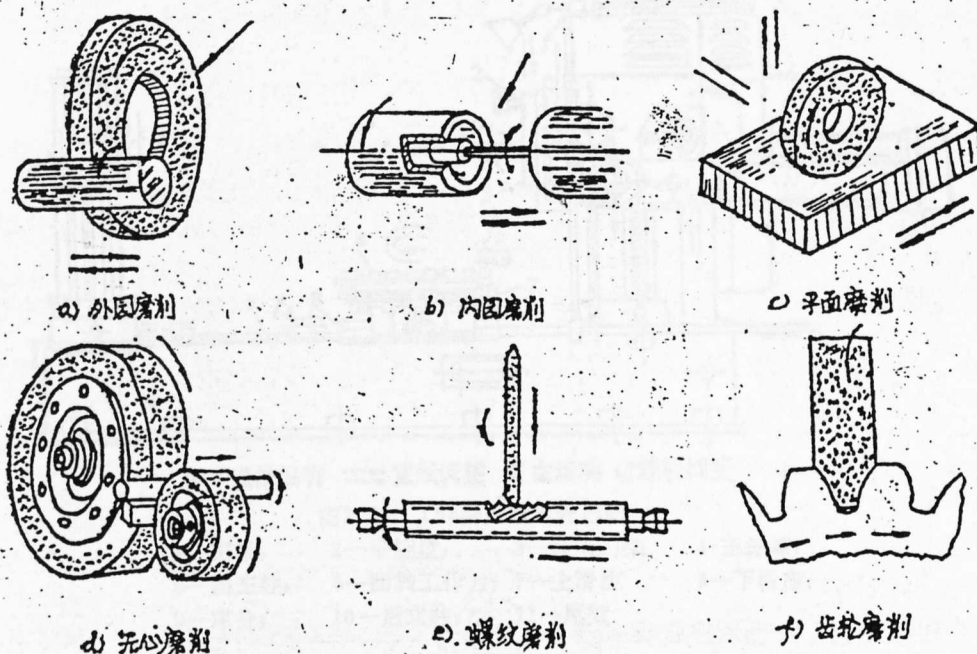


图3-7 磨削的应用

(b)

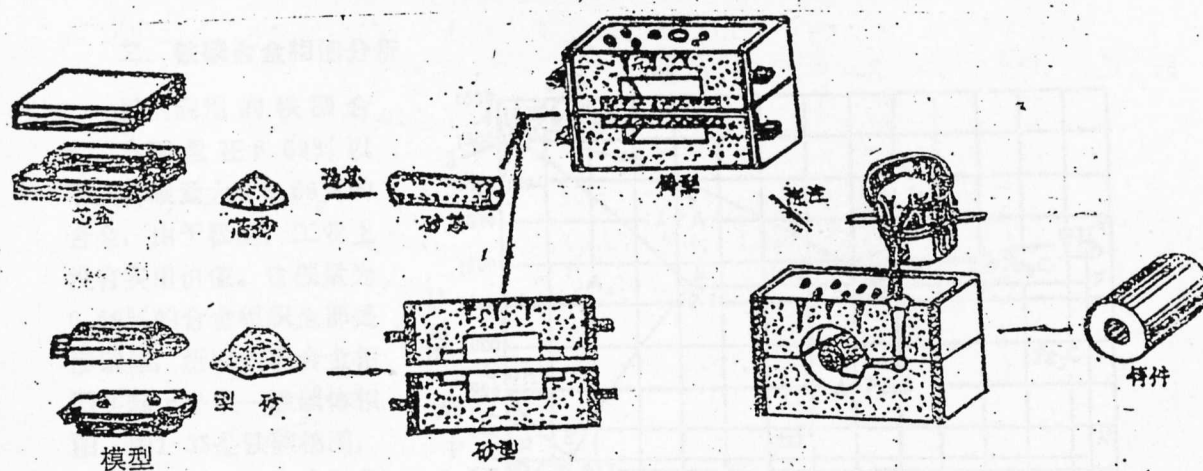


图1-1 套筒的砂型铸造过程

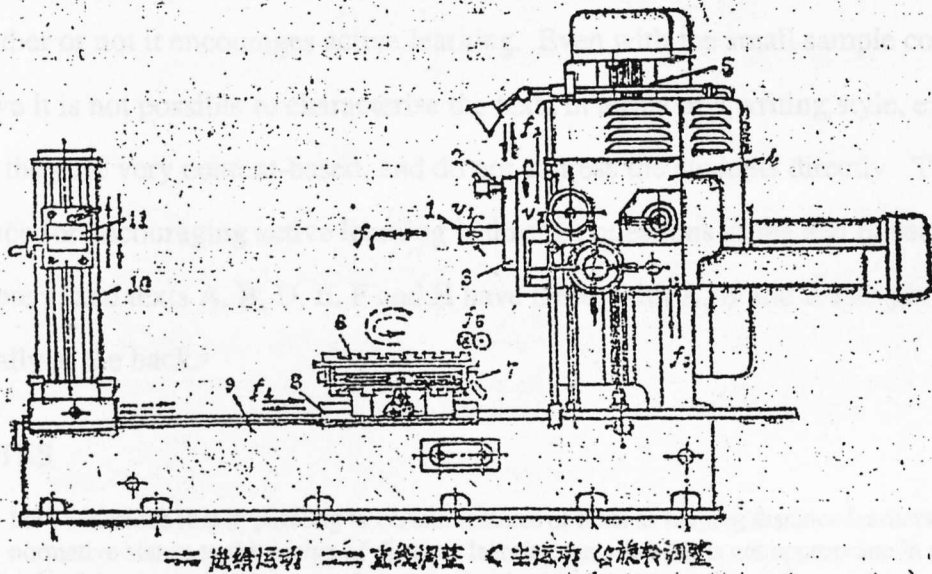


图2-23 T68卧式镗床外形图

- 1—主轴; 2—平旋盘; 3—径向刀架 4—主轴箱;
5—前主柱; 6—回转工作台; 7—上滑座 8—下滑座;
9—床身; 10—后立柱; 11—尾架

Figure 4A.9: an example of an illustration using inappropriate conventions

二、铁碳合金相图分析

目前应用的铁碳合金, 含碳量在 6.69% 以下。含碳量大于 6.69% 的合金, 由于极脆, 工业上没有实用价值。含碳量为 6.69% 的合金组织全部是渗碳体, 所以铁碳合金相图实际上是铁—渗碳体相图。图1-33是铁碳相图, 纵坐标是温度, 横坐标是含碳量的百分重量。

1. 图中特性点

铁碳相图上各特性点所对应的温度与含碳量见表1-4, 其中点A、N、G

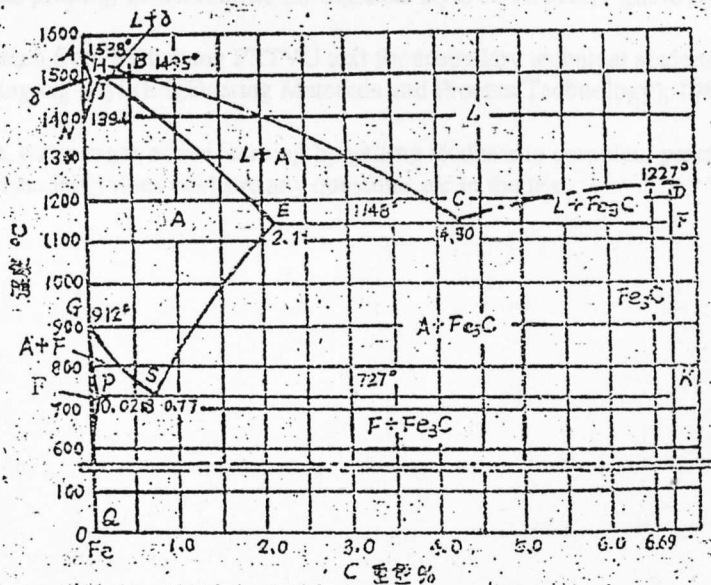


图1-33 铁碳相图

Figure 4A.10: an example of an illustration that lacks clarity

Finally let me deal with the third feature of texts that match the needs of students' study, that is *text style*. Here the concern is with the way the material is written, and in particular whether or not it encourages active learning. Even with the small sample considered above it is not possible to characterise the texts in terms of a writing style, except to say that they are very content-based, and do not address the students directly. The main device for encouraging active learning is through questions at the end of sections or chapters, and texts A, B, D, E, F and H have these, with A, B and F also giving answers usually at the back.⁷

NOTES

1. I am conscious that in pointing to certain features of texts as helping distance learners I am taking a normative stance to the design of distance learning materials. It is not appropriate in this thesis to defend the particular elements chosen, and so in the main I have focused upon the elements identified by RTVU students (e.g.. summaries), or which address the problems they have (e.g.. use of headings and detailed contents list to help skimming).
2. They differ from tutorial material in that tutorial material contains examples and advice that is not tied directly to the course text, is printed in a less book-like form, and is not available through bookshops.
3. Some of this information on Chinese printing terminology was given to me by the editors at CRTVU while I was there in 1982-3. Information on the size of text is given on every text in China along with other publishing information, such as date, number of reprints, number of characters, publisher etc.
4. Nor indeed in any educational text. Alternative formats are available from educational publishers. Double column, for example is used in dictionaries (e.g.. *Jiaoyu cidian*, published in 1989 by Jiangsu Education Publishing House in 32 *kai* format), and landscape is also used (e.g.. *Education in China*, a Ministry of Education publication printed by People's Education Press).
5. It is even used in traditional printing which follows the classical style of vertical, right to left.
6. Figures 4A.8-4A.10 are taken from a Zhejiang PRTVU text for secondary technical students (*Gongcheng cailiao jiqi jiagong goyi* (Engineering Materials and Process Technology), 1989.
7. Text C, the practical book, encourages active learning by getting students to complete practical experiments and so understandably does not have any questions etc in the text.

APPENDIX 5 ANALYSIS OF SELECTED RTVU TELEVISION PROGRAMMES

The television programmes were not be so systematically sampled, nor analysed in detail.

In this appendix I will be more anecdotal because the enormous output could not be sampled while in China, and no video-tape recordings exist outside China. Also apart from the special programmes made for international competitions, and some English language programmes, the format and style of all the programmes I have viewed showed little variety. What I will point to are the main features of these programmes and how they have developed over the period of the study.

By way of illustration let me start with four programmes viewed in 1981, while giving a workshop programme to RTVU staff (Neilson, McCormick & Dunkling, 1981). These programmes were given as good examples by Central China Television (CCTV), who at that time made most of the programmes for CRTVU. Each will be described according to its format, use of visuals, and technical production, along with some overall comments. The first programme was on 'inorganic chemistry' and the format had two parts, a demonstration of a reaction (done in the studio) and a lecture using a blackboard. The demonstration was done using test tubes, Bunsens etc. and at an appropriate time a pre-prepared visual (on card) of the equation was shown. After the demonstration the presenter moved over to a blackboard and gave a conventional lecture. Technically the programme suffered from poor shot line-up and direction, with the camera person having difficulty framing the shot of the blackboard to keep all the writing in view and legible. There were no cuts to remove time wasting activities such as lighting a Bunsen burner, and long periods of silent writing. Occasionally there was a disembodied voice because the presenter had walked out of shot.

The second programme was on 'higher mathematics' and was mostly a lecture at a blackboard, but with some pre-prepared visuals of steps in a calculation presented on a board with felt-tipped pen. Again there were some technical framing problems (poor use of the screen's aspect ratio) leading to difficulties of combining diagrams and associated writing on the blackboard, and requiring the camera person to shoot so wide as to render

the writing illegible. Technically the programmes also suffered from the presenter turning such that only his nose was in shot, and by rubbing out by hand as he would in a lecture theatre (but with disastrous results for legibility). This programme and the one on inorganic chemistry could have been quite good, given more cutting and planned direction of shots.

The third programme was a simple lecture format on 'mechanics' at a blackboard, with the presenter doing what he no doubt did regularly in a lecture room. There were no pre-prepared visuals despite the fact that many diagrams were used (poorly drawn on the blackboard), and that they were added to, and changed, frequently. The result was that most of the diagrams deteriorated to almost illegibility from constant rubbing out and overlaying of lines. In fact the programme would have benefited from two-dimensional models to illustrate the dynamics of mechanisms, that were being analysed mathematically.

The fourth programme was part of an 'English language' course on reading. This involved a manuscript being scanned by the camera with a presenter reading the text and using a pointer to indicate and explain significant words and phrases. These explanations were sometimes elaborated by still photographs, taken straight from an English travel book. The presenter also spoke to camera from behind a desk.¹ Again there were technical problems of the aspect ratio not matching the shape of the text.

These programmes, produced by CCTV in the early days of the RTVU contrast with what has been done in more recent years, even by a PRTVU which does not have broadcast-quality equipment. For example, in Zhejiang PRTVU I was shown a programme on 'structures' that had won an international award for educational television. This used a whole range of visuals: photographs of actual structures, graphics of beams under load and fixing mechanisms, models to show beam deflection including animation, and graphics superimposed on video of actual beams. The explanation was given by voice-over and the format did not use a lecture-type presentation. The Tourist English course, mentioned earlier, had programmes that combined outside filming of actual tourists in

hotels, along with studio presenters explaining the language using graphics of the words etc.

But still it is possible to see programmes made up of a presenter behind a desk giving a lecture, though now it will be supported with pre-prepared handwritten graphics of equations etc.² Some of the technical problems and crude blackboard work have been removed, but many programmes are still lectures with a lot of information being presented in written and audio form. No evidence exists that could quantify this impression, and what there is contradicts it: Sichuan PRTVU is reckoned to be the leading programme maker with 1437 programmes up to 1989, and they report making only 39% of 'talking head' programmes in 1989 (Hawkrige, 1990, p.13)³

NOTES

1. Photographs illustrating the format of this programme were given in a report on the workshop held in 1981 (Neilson, McCormick & Dunkling, 1981, Appendix VI).
2. Such a programme was viewed in Beijing in May 1990. Some of these programmes may of course have been repeats of old programmes.
3. I frankly don't believe this report. In the table of production of television programmes a total production of 5223 hours for all PRTVUs and CRTVU are given in 1989 (Hawkrige, 1990, Table 3.1B). Yet even if all transmitted programmes were new only 4160 would be needed (42 hours per week on Channel 1 and 38 hours on Channel 2); in fact as Table 6.1 shows in 1988 only 5 of the 15 specialities were new, and 3 of these were single courses or inservice programmes. It may be that over a thousand programmes are for non-RTVU use, or are transmitted/distributed locally, but that seems an enormous number. I have already implied in Tables 6.2 & 6.14 that there is no relationship between PRTVUs that make (or could make) large numbers of programmes and those that put on large numbers of local specialities, with Sichuan being extremely low on the latter (2 specialities) and high on the former (1437 hours).

APPENDIX 6 ANALYSIS OF SELF-STUDY EXAMINATION SYSTEM MATERIAL

Every course within a discipline has a published syllabus (*dagang*), whether it is one organized nationally or locally.¹ I have examined the following syllabuses:

- A *Waiguo wenxue zixue kaoshi dagang* (Foreign Literature self-study examination outline), East China Teacher Training University Publishing House, 1986. (Part of the Chinese Language speciality, nationally set.)
- B *Putong louji zixue kaoshi dagang* (Ordinary Logic self-study examination outline), Red Flag Publishing House, 1986. (Part of the Philosophy speciality, nationally set.)
- C *Wenmi zhuanke kaoshi jihua ji ge kechong zixue kaoshi dagang* (Secretarial speciality examination plan and each course's self-study examination outline), Zhejiang Province Higher Education Self-study Examination Office, 1989. (Locally set speciality.)
- D *Jingji guanli gailun zixue kaoshi dagang* (Introduction to Economic Management self-study examination outline), Chinese People's University Publishing House, 1989. (Part of the Administration Management and Political Management specialities, nationally set.)
- E *Ziran kexue jichu zixue kaoshi dagang* (Basic Natural Science self-study examination outline), Higher Education Publishing House, 1988. (Part of the Administration Management and Political Management specialities, nationally set.)
- F *Faxue gailun zixue kaoshi dagang* (Introductory Law self-study examination outline), Wuhan University Publishing House, 1988. (Part of the Law speciality, nationally set.)
- G *Zhongguo gudai wenxue zuopin xuan zixue kaoshi dagang/Zhongguo wenxue shi zixue kaoshi dagang* (Selection of Ancient Chinese Literature and Art self-study examination outline/History of Chinese Literature self-study examination outline), East China Teacher Training University Publishing House, 1987. (Part of the Chinese Language and Literature speciality, nationally set.)

Although these are all basically detailed statements of content set out like any examination syllabus, they contain differing amounts of study aids and advice. Table 6A shows a summary analysis of their contents in broad categories, similar to that done in

Appendix 4 for the RTVU texts, although these syllabuses are of a different nature.

Following the table is an elaboration of that analysis.

Table 6A: an analysis of self-study examination outlines in terms of aids to students

<i>Texts</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
Objectives	x	x	X	X	-	x	x
Study guide	-	x	-	-	x	-	x
Explanations	x	X	x	x	x	x	X
Recommended books	S/R	r	S/R	s	s/R	s	S/R

Key x: a brief inclusion at the beginning of the syllabus/list of content without explanation.

X: inclusion throughout the syllabus e.g. for each section/detailed content almost giving explanation.

S: many set texts forming the basis of study.

R: many reference texts for further study.

s: one or two set texts.

r: one or two reference texts.

Most syllabuses do no more than give vague overall objectives for the course, except for C and D, where for example phrases such as "should understand the development and origins of...." are used. Syllabus D (Economic management) even uses a simple graphic design to highlight the objectives at the beginning of each section. None of the syllabuses gives any more than a brief statement on how to study, usually stating the obvious about analysing what is being read and grasping the main points. The explanations in the case of syllabus B (Ordinary Logic) are very detailed giving truth tables for Boolean algebra that are almost explanations of the ideas, although of course without examples. Only in the case of syllabuses F and G are the recommended texts specifically written for self-study examination students. (In fact many of the other texts for these two sets of courses are either government and party documents or literature texts.)

Notes

1. They do not seem to be available in bookshops, even those specifically for higher education. I was kindly given the syllabuses analysed here by the Zhejiang Higher Education Self-study Examination Office.

CHINESE GLOSSARY

Beijing nongye guangbo hanshou xuexiao	北京农业广播函授学校
Beijing renwen hanshou daxue	北京人文函授大学
Beijing youdian xueyuan hanshou fenyuan	北京邮电学院函授分院
Benke	本科
Changjiang	长江
Chuanboxue	传播学
Da	大
Dagang	大纲
Daxue	大学
Dianhua jiaoyu si	电化教育司
Dianshi jiaoyu	电视教育
Dingxiang zhaosheng	定向招生
Duli hanshou daxue	独立函授大学
Duli hanshou xueyuan	独立函授学院
Dushu wuyong lun	读书无用论
Fuzhuren	副主任
Gangwei peixun	岗位培训
Gangwei zhiwu peixun	岗位职务培训
Gong xu jianmian	供需见面
Gongren Ribao	工人日报
Guangbo dianshi daxue	广播电视大学
Guanli ganbu xueyuan	管理干部学院
Hanshou jiaoyu	函授教育
Huadong	华东
Huanan	华南
Huazhong	华中
Jiaoyu ganshi	教育干事
Jiaoyu xueyuan	教育学院

Jiceng	基层
Jichuke	基础课
Jidian	机电
Jixu gongcheng jiaoyu	继续工程教育
Jixu jiaoyu	继续教育
Kaifang jiaoyu	开放教育
Kaifang xuexi	开放学习
Kuanjin yanchu	宽进严出
Liaoyuan xuexiao	燎原学校
Liu qin buren	六亲不认
Minban	民办
Muqian de xingshi he renwu	目前的形势和任务
Nongmin daxue	农民大学
Nongye guangbo dianshi jiaoyu wang	农业广播电视教育网
Nongye guangbo dianshi xuexiao	农业广播电视学校
Nongye guangbo xuexiao	农业广播学校
Pujiaohua	普教化
Putong chuzhongxue	普通初级中学
Putong gaodeng xuexiao hanshou bu	普通高等学校函授部
Putong gaodeng jiaoyu	普通高等教育
Putong gaodeng zhongxue	普通高级中学
Putong gaodeng xuexiao juban de yedaxue	普通高等学校举办的夜大学
Putonghua	普通话
Qifa	启发
Quanguo gaodeng jiaoyu zixue kaoshi weiyuanhui	全国高等教育自学考试委员会
Quanguo gaodeng jiaoyu zixue kaoshi zhidao weiyuanhui	全国高等教育自学考试指导委员会
Renda	人大
Renmin Ribao she xinwen zhili kaifa zhongxin hanshou bu	人民日报社新闻智力开发中心函授部

Shehui zhu xue	社会助学
Shehui shijian	社会实践
Shifan daxue	师范大学
Shouyu xueshi xuewei	授予学士学位
Tongji Daxue	同济大学
Tuochan	脱产
Xiandai yuan juli jiaoyu	现代远距离教育
Xinhua shudian	新华书店
Xueli jiaoyu	学历教育
Xuexi shenghuo	学习生活
Xunhui jiaoyu zhan	巡回教育站
Yedaxue	夜大学
Yingjie gaozhong biyesheng	应届高中毕业生
Yuan juli jiaoyu	远距离教育
Zhejiang zixue kaoshi	浙江自学考试
Zhigong daxue	职工大学
Zhishi qingnian	知识青年
Zhongdeng zhiye jishu jiaoyu	中等职业技术教育
Zhongguo dianshi shifan xueyuan	中国电视师范学院
Zhongguo jiaoyu dianshitai	中国教育电视台
Zhongguo jiaoyu diantai	中国教育电台
Zhongguo luoji yu yuyan daxue	中国逻辑与语言大学
Zhongguo nongcun zhifu jishu hanshou daxue	中国农村致富技术函授大学
Zhongguo nongye kuaiji hanshou xuexiao	中国农业会计函授学校
Zhongguo Renmin Daxue	中国人民大学
Zhongguo tongji ganbu dianshi hanshou xueyuan	中国统计干部电视函授学院
Zhongyang guangbo shiyeju	中央广播事业局
Zhongyang nongye guangbo xuexiao	中央农业广播学校
Zhongzhuan	中专

Zhuanke	专科
Zhuanmen rencai	专门人材
Zhuanye hege zhengshu	专业合格证书
Zhuanye zhengshu	专业证书
Zixue jianting sheng	自学监听生
Zixue re	自学热
Zonghe jiaoyu jiemu	综合教育节目
Zuo shenma xue shenma	做什么学什么